

SAFETY DATA SHEET



Revision date 24-Oct-2023

Revision Number 1

1. Identification

Product identifier

Product Name CO-6 Supernova

Other means of identification

Product Code(s) FG00851

UN number or ID number UN3082

Synonyms 35550A

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard statements**Warning**

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H351 - Suspected of causing cancer

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/clothing and eye/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Contaminated work clothing must not be allowed out of the workplace

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

8.877 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Other information

Harmful to aquatic life with long lasting effects. Toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Frits, chemicals	65997-18-4	10 - 20
Quartz	14808-60-7	5 - <10
Lithium carbonate	554-13-2	1 - <3
Calcium molybdate	7789-82-4	1 - <3
Titanium dioxide	13463-67-7	1 - <3
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium tetrachloride Zr TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust

		TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	
Calcium molybdate 7789-82-4	TWA: 10 mg/m ³ Mo inhalable particulate matter TWA: 3 mg/m ³ Mo respirable particulate matter	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ Mo	IDLH: 5000 mg/m ³ Mo
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³ TWA: 2.4 mg/m ³ CIB 63 fine TWA: 0.3 mg/m ³ CIB 63 ultrafine, including engineered nanoscale

Biological occupational exposure limits

Chemical name	ACGIH
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical

Appropriate engineering controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Physical state Liquid

Appearance

Color

Odor

Odor threshold

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	

Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Other information		
Explosive properties	No information available	
Oxidizing properties	No information available	
VOC Content (%)	No information available	

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Itching. Rashes. Hives.
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Acute toxicity

Numerical measures of toxicity

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	488.30 mg/kg
ATEmix (dermal)	6,493.80 mg/kg
ATEmix (inhalation-dust/mist)	5.21 mg/l

Unknown acute toxicity

8.877 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Lithium carbonate 554-13-2	= 525 mg/kg (Rat)	> 3000 mg/kg (Rabbit)	> 2.17 mg/L (Rat) 4 h
Calcium molybdate 7789-82-4	-	> 2000 mg/kg (Rat)	> 5.84 mg/L (Rat) 4 h
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	= 5.09 mg/L (Rat) 4 h
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation** No information available.**Serious eye damage/eye irritation** No information available.**Respiratory or skin sensitization** May cause an allergic skin reaction.**Germ cell mutagenicity** No information available.**Carcinogenicity** Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X
Quartz 14808-60-7	A2	Group 1	Known	X
Titanium dioxide 13463-67-7	-	Group 2B	-	X

Legend**ACGIH (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.

STOT - single exposure	No information available.
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Target organ effects	Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate.
Aspiration hazard	No information available.
Other adverse effects	
Interactive effects	

12. Ecological information

Ecotoxicity Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Lithium carbonate 554-13-2	-	LC50: =30.3mg/L (96h, Oncorhynchus mykiss)	-	-
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging Do not reuse empty containers.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

UN number or ID number	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant	PP

Marine pollutant Description	Frits, chemicals UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
Emergency Response Guide Number	171
<u>TDG</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	16, 99
Marine pollutant name	Frits, chemicals.
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
<u>MEX</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	274, 331, 335
<u>ICAO (air)</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197, A215
<u>IATA</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197
ERG Code	9L
<u>IMDG</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	P
Marine Pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
<u>RID</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
<u>ADR</u>	

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, (-)

ADN

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Equipment Requirements	PP

15. Regulatory information**International Inventories****TSCA**

Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Frits, chemicals	65997-18-4	Present	Active
Bismuth Trioxide	1304-76-3	Present	Active
Quartz	14808-60-7	Present	Active
Lithium carbonate	554-13-2	Present	Active
Calcium molybdate	7789-82-4	Present	Active
Titanium dioxide	13463-67-7	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Ethanolamine	141-43-5	Present	Active

DSL/NDSL

Contact supplier for inventory compliance status.

EINECS/ELINCS

Contact supplier for inventory compliance status.

ENCS

Contact supplier for inventory compliance status.

IECSC

Contact supplier for inventory compliance status.

KECL

Contact supplier for inventory compliance status.

PICCS

Contact supplier for inventory compliance status.

AIIC

Contact supplier for inventory compliance status.

NZIoC

Contact supplier for inventory compliance status.

Legend:**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AIIC** - Australian Inventory of Industrial Chemicals**NZIoC** - New Zealand Inventory of Chemicals

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Frits, chemicals - 65997-18-4	0.1 1.0
Lithium carbonate - 554-13-2	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Frits, chemicals 65997-18-4	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Frits, chemicals 65997-18-4	X	-	X
Quartz 14808-60-7	X	X	X
Lithium carbonate 554-13-2	X	X	-
Titanium dioxide 13463-67-7	X	X	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information**NFPA****HMIS**

Chronic Hazard Star Legend

Health hazards 2

Health hazards 2 *

Flammability 0

Flammability 0

Instability 0

Physical hazards 0

Special hazards -

Personal protection X

* = Chronic Health Hazard

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: Exposure controls/personal protection**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AELG(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 24-Oct-2023

Revision Note**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 24-Oct-2023

Revision Number 1

1. Identification

Product identifier

Product Name CO-7 Solar Flare

Other means of identification

Product Code(s) FG00852

UN number or ID number UN3082

Synonyms 35551B

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard statements**Warning**

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H351 - Suspected of causing cancer

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/clothing and eye/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Contaminated work clothing must not be allowed out of the workplace

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

9.987 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Other information

Harmful to aquatic life with long lasting effects. Toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Frits, chemicals	65997-18-4	10 - 20
Quartz	14808-60-7	5 - <10
Iron oxide (Fe ₂ O ₃)	1309-37-1	3 - <5
Calcium molybdate	7789-82-4	1 - <3
Titanium dioxide	13463-67-7	1 - <3
Lithium carbonate	554-13-2	1 - <3

1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1
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4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage**Precautions for safe handling**

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection**Control parameters**

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium tetrachloride Zr TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust

		: (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	
Iron oxide (Fe ₂ O ₃) 1309-37-1	TWA: 5 mg/m ³ respirable particulate matter	TWA: 10 mg/m ³ fume TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ fume and total dust Iron oxide (vacated) TWA: 5 mg/m ³ respirable fraction regulated under Rouge	IDLH: 2500 mg/m ³ Fe dust and fume TWA: 5 mg/m ³ Fe dust and fume
Calcium molybdate 7789-82-4	TWA: 10 mg/m ³ Mo inhalable particulate matter TWA: 3 mg/m ³ Mo respirable particulate matter	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ Mo	IDLH: 5000 mg/m ³ Mo
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³ TWA: 2.4 mg/m ³ CIB 63 fine TWA: 0.3 mg/m ³ CIB 63 ultrafine, including engineered nanoscale

Biological occupational exposure limits

Chemical name	ACGIH
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical

Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Physical state	Liquid
Appearance	
Color	
Odor	
Odor threshold	

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
<u>Other information</u>		
Explosive properties	No information available	
Oxidizing properties	No information available	
VOC Content (%)	No information available	

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Itching. Rashes. Hives.
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Acute toxicity**Numerical measures of toxicity**

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	603.70 mg/kg
ATEmix (dermal)	7,362.60 mg/kg
ATEmix (inhalation-dust/mist)	6.07 mg/l

Unknown acute toxicity

9.987 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Iron oxide (Fe2O3) 1309-37-1	> 10000 mg/kg (Rat)	-	-
Calcium molybdate 7789-82-4	-	> 2000 mg/kg (Rat)	> 5.84 mg/L (Rat) 4 h
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	= 5.09 mg/L (Rat) 4 h
Lithium carbonate 554-13-2	= 525 mg/kg (Rat)	> 3000 mg/kg (Rabbit)	> 2.17 mg/L (Rat) 4 h
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation** No information available.**Serious eye damage/eye irritation** No information available.**Respiratory or skin sensitization** May cause an allergic skin reaction.**Germ cell mutagenicity** No information available.**Carcinogenicity**

Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X
Quartz 14808-60-7	A2	Group 1	Known	X
Iron oxide (Fe2O3) 1309-37-1	-	Group 3	-	-
Titanium dioxide 13463-67-7	-	Group 2B	-	X

Legend**ACGIH (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans
 Group 2B - Possibly Carcinogenic to Humans
 Group 3 - Not Classifiable as to Carcinogenicity in Humans
NTP (National Toxicology Program)
 Known - Known Carcinogen
 Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
 X - Present

Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Target organ effects	Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate.
Aspiration hazard	No information available.
Other adverse effects	
Interactive effects	

12. Ecological information

Ecotoxicity Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Iron oxide (Fe ₂ O ₃) 1309-37-1	-	LC50: =100000mg/L (96h, Danio rerio)	-	-
Lithium carbonate 554-13-2	-	LC50: =30.3mg/L (96h, Oncorhynchus mykiss)	-	-
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability

Bioaccumulation	There is no data for this product.
Other adverse effects	No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging Do not reuse empty containers.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

UN number or ID number UN3082
Proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Special Provisions 8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant PP
Marine pollutant Frits, chemicals
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
Emergency Response Guide Number 171

TDG

UN number or ID number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Special Provisions 16, 99
Marine pollutant name Frits, chemicals.
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

MEX

UN number or ID number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Technical Name Frits, chemicals
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions 274, 331, 335

ICAO (air)

UN number or ID number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions A97, A158, A197, A215

IATA

UN number or ID number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Technical Name Frits, chemicals
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions A97, A158, A197
ERG Code 9L

IMDG

UN number or ID number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
EmS-No F-A, S-F

Special Provisions	274, 335, 969
Marine pollutant	P
Marine Pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant

RID

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

ADR

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, (-)

ADN

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Equipment Requirements	PP

15. Regulatory information

International Inventories**TSCA**

Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Frits, chemicals	65997-18-4	Present	Active
Bismuth Trioxide	1304-76-3	Present	Active
Quartz	14808-60-7	Present	Active
Iron oxide (Fe ₂ O ₃)	1309-37-1	Present	Active
Calcium molybdate	7789-82-4	Present	Active
Titanium dioxide	13463-67-7	Present	Active
Lithium carbonate	554-13-2	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Ethanolamine	141-43-5	Present	Active

**DSL/NDSL
EINECS/ELINCS**

Contact supplier for inventory compliance status.
Contact supplier for inventory compliance status.

ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Frits, chemicals - 65997-18-4	0.1 1.0
Lithium carbonate - 554-13-2	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Frits, chemicals 65997-18-4	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Frits, chemicals 65997-18-4	X	-	X
Quartz 14808-60-7	X	X	X
Iron oxide (Fe ₂ O ₃) 1309-37-1	X	X	X

Titanium dioxide 13463-67-7	X	X	X
Lithium carbonate 554-13-2	X	X	-
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 2	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 2 *	Flammability 0	Physical hazards 0	Personal protection X

Chronic Hazard Star Legend * = Chronic Health Hazard

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: Exposure controls/personal protection**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGl(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 24-Oct-2023

Revision Note**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 24-Oct-2023

Revision Number 1

1. Identification

Product identifier

Product Name CO-8 Dark Star

Other means of identification

Product Code(s) FG00861

UN number or ID number UN3082

Synonyms 35552C

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Skin sensitization	Category 1
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Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard statements

Warning

H317 - May cause an allergic skin reaction



Physical state Liquid

Precautionary Statements - Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing must not be allowed out of the workplace

Wear protective gloves

Precautionary Statements - Response

Specific treatment (see .? on this label)

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other information

Harmful to aquatic life with long lasting effects. Harmful to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Quartz	14808-60-7	10 - 20
Manganese	7439-96-5	3 - <5
Calcium molybdate	7789-82-4	1 - <3
Kaolin	1332-58-7	1 - <3
Limestone	1317-65-3	1 - <3
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1

4. First-aid measures

Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance.

Inhalation

Remove to fresh air.

Eye contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact

Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.

Ingestion	Rinse mouth.
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Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
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Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. Handling and storage**Precautions for safe handling**

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.
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Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.
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8. Exposure controls/personal protection

Control parameters

Exposure Limits

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust
Manganese 7439-96-5	TWA: 0.02 mg/m ³ respirable particulate matter TWA: 0.1 mg/m ³ inhalable particulate matter	(vacated) TWA: 1 mg/m ³ fume (vacated) STEL: 3 mg/m ³ fume (vacated) Ceiling: 5 mg/m ³ fume Ceiling: 5 mg/m ³ fume	IDLH: 500 mg/m ³ TWA: 1 mg/m ³ fume STEL: 3 mg/m ³
Calcium molybdate 7789-82-4	TWA: 10 mg/m ³ Mo inhalable particulate matter TWA: 3 mg/m ³ Mo respirable particulate matter	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ Mo	IDLH: 5000 mg/m ³ Mo
Kaolin 1332-58-7	TWA: 2 mg/m ³ particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Limestone 1317-65-3	-	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust

Appropriate engineering controls

Engineering controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Hand protection

Wear suitable gloves.

Skin and body protection

Wear suitable protective clothing.

Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid
 Appearance
 Color
 Odor
 Odor threshold

Property	Values	Remarks • Method
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Other information		
Explosive properties	No information available	
Oxidizing properties	No information available	
VOC Content (%)	No information available	

10. Stability and reactivity

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Conditions to avoid None known based on information supplied.

Incompatible materials None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives.

Acute toxicity**Numerical measures of toxicity**

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	21,457.10 mg/kg
ATEmix (dermal)	35,601.80 mg/kg

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Manganese 7439-96-5	= 9 g/kg (Rat)	-	> 5.14 mg/L (Rat) 4 h
Calcium molybdate 7789-82-4	-	> 2000 mg/kg (Rat)	> 5.84 mg/L (Rat) 4 h
Kaolin 1332-58-7	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rat)	-
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	No information available.

Carcinogenicity No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Quartz 14808-60-7	A2	Group 1	Known	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Target organ effects	Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Lungs, Gastrointestinal tract (GI).
Aspiration hazard	No information available.
Other adverse effects	
Interactive effects	

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Manganese 7439-96-5	-	LC50: >3.6mg/L (96h, Oncorhynchus mykiss)	-	-
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: ≈16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging Do not reuse empty containers.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

Notes

UN number or ID number
 Proper shipping name
 Transport hazard class(es)
 Packing group
 Special Provisions
 DOT Marine Pollutant
 Description
 Emergency Response Guide
 Number

No components found suitable for Technical Name.

UN3082
 Environmentally hazardous substance, liquid, n.o.s.
 9
 III
 8, 146, 173, 335, IB3, T4, TP1, TP29
 NP
 UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III, Marine pollutant
 171

TDG**Notes**

UN number or ID number
 UN proper shipping name
 Transport hazard class(es)
 Packing group
 Special Provisions
 Description

No components found suitable for Technical Name.

UN3082
 Environmentally hazardous substance, liquid, n.o.s.
 9
 III
 16, 99
 UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III

MEX**Notes**

UN number or ID number
 UN proper shipping name
 Transport hazard class(es)
 Packing group
 Description
 Special Provisions

No components found suitable for Technical Name.

UN3082
 Environmentally hazardous substance, liquid, n.o.s.
 9
 III
 UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III
 274, 331, 335

ICAO (air)**Notes**

UN number or ID number
 UN proper shipping name
 Transport hazard class(es)
 Packing group
 Description
 Special Provisions

No components found suitable for Technical Name.

UN3082
 Environmentally hazardous substance, liquid, n.o.s.
 9
 III
 UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III
 A97, A158, A197, A215

IATA**Notes**

UN number or ID number
 UN proper shipping name
 Transport hazard class(es)
 Packing group
 Description
 Special Provisions
 ERG Code

No components found suitable for Technical Name.

UN3082
 Environmentally hazardous substance, liquid, n.o.s.
 9
 III
 UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III
 A97, A158, A197
 9L

IMDG**Notes**

UN number or ID number
 UN proper shipping name
 Transport hazard class(es)
 Packing group
 EmS-No
 Special Provisions
 Marine pollutant
 Description

No components found suitable for Technical Name.

UN3082
 Environmentally hazardous substance, liquid, n.o.s.
 9
 III
 F-A, S-F
 274, 335, 969
 P
 UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III, Marine pollutant

RID**Notes**

UN number or ID number
 UN proper shipping name
 Transport hazard class(es)

No components found suitable for Technical Name.

UN3082
 Environmentally hazardous substance, liquid, n.o.s.
 9

Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III

ADR

Notes	No components found suitable for Technical Name.
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III, (-)

ADN

Notes	No components found suitable for Technical Name.
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III
Equipment Requirements	PP

15. Regulatory information**International Inventories**

TSCA Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Bismuth Trioxide	1304-76-3	Present	Active
Quartz	14808-60-7	Present	Active
Nepheline syenite	37244-96-5	-	Unknown *
Manganese	7439-96-5	Present	Active
Calcium molybdate	7789-82-4	Present	Active
Kaolin	1332-58-7	Present	Active
Limestone	1317-65-3	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
Aluminum oxide (Al ₂ O ₃)	1344-28-1	Present	Active
Iron oxide (Fe ₂ O ₃)	1309-37-1	Present	Active
Polyphosphoric acids, sodium salts	68915-31-1	Present	Active
Barium oxide	1304-28-5	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Mica	12001-26-2	-	Unknown *
Titanium dioxide	13463-67-7	Present	Active
Silica, cristobalite	14464-46-1	Present	Active
Ethanolamine	141-43-5	Present	Active

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL Contact supplier for inventory compliance status.

EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korea Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Manganese - 7439-96-5	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Quartz 14808-60-7	X	X	X
Manganese 7439-96-5	X	X	X
Kaolin 1332-58-7	X	X	X
Limestone 1317-65-3	X	X	X
Aluminum oxide (Al ₂ O ₃) 1344-28-1	X	X	X
Iron oxide (Fe ₂ O ₃)	X	X	X

1309-37-1			
Barium oxide 1304-28-5	X	-	X
Mica 12001-26-2	X	-	X
Titanium dioxide 13463-67-7	X	X	X
Silica, cristobalite 14464-46-1	X	X	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 2	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 2	Flammability 0	Physical hazards 0	Personal protection X

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: Exposure controls/personal protection**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AELG(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 24-Oct-2023

Revision Note**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 24-Oct-2023

Revision Number 1

1. Identification

Product identifier

Product Name CO-13 Mars Crystal

Other means of identification

Product Code(s) FG00849

UN number or ID number UN3082

Synonyms 35553D

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Skin sensitization	Category 1
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard statements**Warning**

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Contaminated work clothing must not be allowed out of the workplace

Wear protective gloves

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

Specific treatment (see .? on this label)

Get medical advice/attention if you feel unwell

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

2.287 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Other information

Harmful to aquatic life with long lasting effects. Toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Water	7732-18-5	40 - 60
Frits, chemicals	65997-18-4	20 - 40
Bismuth Trioxide	1304-76-3	10 - 20
Kaolin	1332-58-7	5 - <10
Iron oxide (Fe ₂ O ₃)	1309-37-1	5 - <10
Calcium molybdate	7789-82-4	1 - <3
Sodium carboxymethyl cellulose	9004-32-4	0.1 - 1
Smectite-group minerals	12199-37-0	0.1 - 1
Limestone	1317-65-3	0.1 - 1
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1
Ethanolamine	141-43-5	<0.1

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
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Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium tetrachloride Zr TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
Kaolin 1332-58-7	TWA: 2 mg/m ³ particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust

		respirable fraction	
Iron oxide (Fe ₂ O ₃) 1309-37-1	TWA: 5 mg/m ³ respirable particulate matter	TWA: 10 mg/m ³ fume TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ fume and total dust Iron oxide (vacated) TWA: 5 mg/m ³ respirable fraction regulated under Rouge	IDLH: 2500 mg/m ³ Fe dust and fume TWA: 5 mg/m ³ Fe dust and fume
Calcium molybdate 7789-82-4	TWA: 10 mg/m ³ Mo inhalable particulate matter TWA: 3 mg/m ³ Mo respirable particulate matter	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ Mo	IDLH: 5000 mg/m ³ Mo
Limestone 1317-65-3	-	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Ethanolamine 141-43-5	STEL: 6 ppm TWA: 3 ppm	TWA: 3 ppm TWA: 6 mg/m ³ (vacated) TWA: 3 ppm (vacated) TWA: 8 mg/m ³ (vacated) STEL: 6 ppm (vacated) STEL: 15 mg/m ³	IDLH: 30 ppm TWA: 3 ppm TWA: 8 mg/m ³ STEL: 6 ppm STEL: 15 mg/m ³

Biological occupational exposure limits

Chemical name	ACGIH
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical

Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.
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9. Physical and chemical properties**Information on basic physical and chemical properties**

Physical state	Liquid
Appearance	

Color
Odor
Odor threshold

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
<u>Other information</u>		
Explosive properties	No information available	
Oxidizing properties	No information available	
VOC Content (%)	No information available	

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives.

Acute toxicity**Numerical measures of toxicity**

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 459.10 mg/kg
 ATEmix (dermal) 6,290.10 mg/kg
 ATEmix (inhalation-dust/mist) 5.18 mg/l

Unknown acute toxicity

2.287 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg (Rat)	-	-
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Bismuth Trioxide 1304-76-3	= 5 g/kg (Rat)	-	> 5.07 mg/L (Rat) 4 h
Kaolin 1332-58-7	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rat)	-
Iron oxide (Fe2O3) 1309-37-1	> 10000 mg/kg (Rat)	-	-
Calcium molybdate 7789-82-4	-	> 2000 mg/kg (Rat)	> 5.84 mg/L (Rat) 4 h
Sodium carboxymethyl cellulose 9004-32-4	= 27000 mg/kg (Rat)	-	> 5800 mg/m ³ (Rat) 4 h
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h
Ethanolamine 141-43-5	= 1720 mg/kg (Rat)	= 1000 mg/kg (Rabbit)	> 1.3 mg/L (Rat) 6 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X
Iron oxide (Fe2O3) 1309-37-1	-	Group 3	-	-

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.**STOT - single exposure** No information available.**STOT - repeated exposure** May cause damage to organs through prolonged or repeated exposure.**Target organ effects** Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate, Gastrointestinal tract (GI).**Aspiration hazard** No information available.**Other adverse effects****Interactive effects**

12. Ecological information

Ecotoxicity Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Iron oxide (Fe ₂ O ₃) 1309-37-1	-	LC50: =100000mg/L (96h, Danio rerio)	-	-
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-
Ethanolamine 141-43-5	EC50: =15mg/L (72h, Desmodesmus subspicatus)	LC50: =227mg/L (96h, Pimephales promelas) LC50: =3684mg/L (96h, Brachydanio rerio) LC50: 300 - 1000mg/L (96h, Lepomis macrochirus) LC50: 114 - 196mg/L (96h, Oncorhynchus mykiss) LC50: >200mg/L (96h, Oncorhynchus mykiss)	-	EC50: =65mg/L (48h, Daphnia magna)

Persistence and degradability

Bioaccumulation There is no data for this product.

Chemical name	Partition coefficient
Ethanolamine 141-43-5	-1.91

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging Do not reuse empty containers.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

UN number or ID number UN3082
Proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Special Provisions 8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant PP
Marine pollutant Frits, chemicals
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
Emergency Response Guide Number 171

TDG

UN number or ID number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Special Provisions 16, 99
Marine pollutant name Frits, chemicals.
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

MEX

UN number or ID number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Technical Name Frits, chemicals
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions 274, 331, 335

ICAO (air)

UN number or ID number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9

Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197, A215

IATA

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197
ERG Code	9L

IMDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	P
Marine Pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant

RID

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

ADR

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, (-)

ADN

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Equipment Requirements	PP

15. Regulatory information**International Inventories**

TSCA Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Frits, chemicals	65997-18-4	Present	Active
Bismuth Trioxide	1304-76-3	Present	Active
Kaolin	1332-58-7	Present	Active
Iron oxide (Fe ₂ O ₃)	1309-37-1	Present	Active
Calcium molybdate	7789-82-4	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
Limestone	1317-65-3	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Ethanolamine	141-43-5	Present	Active

DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.

Legend:**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AIIC** - Australian Inventory of Industrial Chemicals**NZIoC** - New Zealand Inventory of Chemicals**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Frits, chemicals - 65997-18-4	0.1 1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Frits, chemicals 65997-18-4	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive

Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Frits, chemicals 65997-18-4	X	-	X
Kaolin 1332-58-7	X	X	X
Iron oxide (Fe ₂ O ₃) 1309-37-1	X	X	X
Limestone 1317-65-3	X	X	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 2	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 2 *	Flammability 0	Physical hazards 0	Personal protection X

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AELG(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

Revision date 24-Oct-2023

Revision Note

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 24-Oct-2023

Revision Number 1

1. Identification

Product identifier

Product Name CO-14 Solar Rainbow

Other means of identification

Product Code(s) FG00850

UN number or ID number UN3082

Synonyms 35554E

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Skin sensitization	Category 1
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Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard statements

Warning

H317 - May cause an allergic skin reaction

**Physical state** Liquid**Precautionary Statements - Prevention**

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing must not be allowed out of the workplace

Wear protective gloves

Precautionary Statements - Response

Specific treatment (see .? on this label)

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other information

No information available.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Water	7732-18-5	40 - 60
Bismuth Trioxide	1304-76-3	10 - 20
Quartz	14808-60-7	10 - 20
Nepheline syenite	37244-96-5	10 - 20
Manganese	7439-96-5	3 - <5
Calcium molybdate	7789-82-4	1 - <3
Kaolin	1332-58-7	1 - <3
Limestone	1317-65-3	1 - <3
Sodium carboxymethyl cellulose	9004-32-4	0.1 - 1
Smectite-group minerals	12199-37-0	0.1 - 1
Aluminum oxide (Al ₂ O ₃)	1344-28-1	0.1 - 1
Iron oxide (Fe ₂ O ₃)	1309-37-1	0.1 - 1
Polyphosphoric acids, sodium salts	68915-31-1	0.1 - 1
Barium oxide	1304-28-5	0.1 - 1
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1
Titanium dioxide	13463-67-7	<0.1
Mica	12001-26-2	<0.1
Silica, cristobalite	14464-46-1	<0.1
Ethanolamine	141-43-5	<0.1

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Rinse mouth.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
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Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection

Control parameters

Exposure Limits

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust
Manganese 7439-96-5	TWA: 0.02 mg/m ³ respirable particulate matter TWA: 0.1 mg/m ³ inhalable particulate matter	(vacated) TWA: 1 mg/m ³ fume (vacated) STEL: 3 mg/m ³ fume (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ fume	IDLH: 500 mg/m ³ TWA: 1 mg/m ³ fume STEL: 3 mg/m ³
Calcium molybdate 7789-82-4	TWA: 10 mg/m ³ Mo inhalable particulate matter TWA: 3 mg/m ³ Mo respirable particulate matter	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ Mo	IDLH: 5000 mg/m ³ Mo
Kaolin 1332-58-7	TWA: 2 mg/m ³ particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Limestone 1317-65-3	-	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Aluminum oxide (Al ₂ O ₃) 1344-28-1	TWA: 1 mg/m ³ respirable particulate matter	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	-

Iron oxide (Fe ₂ O ₃) 1309-37-1	TWA: 5 mg/m ³ respirable particulate matter	TWA: 10 mg/m ³ fume TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ fume and total dust Iron oxide (vacated) TWA: 5 mg/m ³ respirable fraction regulated under Rouge	IDLH: 2500 mg/m ³ Fe dust and fume TWA: 5 mg/m ³ Fe dust and fume
Barium oxide 1304-28-5	TWA: 0.5 mg/m ³ Ba	TWA: 0.5 mg/m ³ Ba regulated under CAS 7440-39-3 (vacated) TWA: 0.5 mg/m ³ Ba	IDLH: 50 mg/m ³ Ba TWA: 0.5 mg/m ³ except Barium sulfate Ba
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³ TWA: 2.4 mg/m ³ CIB 63 fine TWA: 0.3 mg/m ³ CIB 63 ultrafine, including engineered nanoscale
Mica 12001-26-2	TWA: 0.1 mg/m ³ respirable particulate matter	(vacated) TWA: 3 mg/m ³ respirable dust <1% Crystalline silica TWA: 20 mppcf <1% Crystalline silica	IDLH: 1500 mg/m ³ TWA: 3 mg/m ³ containing <1% Quartz respirable dust
Silica, cristobalite 14464-46-1	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.05 mg/m ³ respirable dust : (1/2)(250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (1/2)(10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 25 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust
Ethanolamine 141-43-5	STEL: 6 ppm TWA: 3 ppm	TWA: 3 ppm TWA: 6 mg/m ³ (vacated) TWA: 3 ppm (vacated) TWA: 8 mg/m ³ (vacated) STEL: 6 ppm (vacated) STEL: 15 mg/m ³	IDLH: 30 ppm TWA: 3 ppm TWA: 8 mg/m ³ STEL: 6 ppm STEL: 15 mg/m ³

Appropriate engineering controls**Engineering controls**

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear safety glasses with side shields (or goggles).

Hand protection

Wear suitable gloves.

Skin and body protection

Wear suitable protective clothing.

Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties**Information on basic physical and chemical properties****Physical state**

Liquid

Appearance

Color
Odor
Odor threshold

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
<u>Other information</u>		
Explosive properties	No information available	
Oxidizing properties	No information available	
VOC Content (%)	No information available	

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives.

Acute toxicity**Numerical measures of toxicity**

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 22,278.60 mg/kg
ATEmix (dermal) 32,536.20 mg/kg

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg (Rat)	-	-
Bismuth Trioxide 1304-76-3	= 5 g/kg (Rat)	-	> 5.07 mg/L (Rat) 4 h
Manganese 7439-96-5	= 9 g/kg (Rat)	-	> 5.14 mg/L (Rat) 4 h
Calcium molybdate 7789-82-4	-	> 2000 mg/kg (Rat)	> 5.84 mg/L (Rat) 4 h
Kaolin 1332-58-7	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rat)	-
Sodium carboxymethyl cellulose 9004-32-4	= 27000 mg/kg (Rat)	-	> 5800 mg/m ³ (Rat) 4 h
Aluminum oxide (Al ₂ O ₃) 1344-28-1	> 5000 mg/kg (Rat)	-	-
Iron oxide (Fe ₂ O ₃) 1309-37-1	> 10000 mg/kg (Rat)	-	-
Polyphosphoric acids, sodium salts 68915-31-1	= 3053 mg/kg (Rat)	-	-
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	= 5.09 mg/L (Rat) 4 h
Ethanolamine 141-43-5	= 1720 mg/kg (Rat)	= 1000 mg/kg (Rabbit)	> 1.3 mg/L (Rat) 6 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Quartz 14808-60-7	A2	Group 1	Known	X
Iron oxide (Fe ₂ O ₃)	-	Group 3	-	-

1309-37-1				
Titanium dioxide 13463-67-7	-	Group 2B	-	X
Silica, cristobalite 14464-46-1	A2	Group 1	Known	X

Legend**ACGIH (American Conference of Governmental Industrial Hygienists)**

A2 - Suspected Human Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.**STOT - single exposure** No information available.**STOT - repeated exposure** No information available.**Target organ effects** Respiratory system, Eyes, Skin, Lungs, Gastrointestinal tract (GI).**Aspiration hazard** No information available.**Other adverse effects****Interactive effects****12. Ecological information****Ecotoxicity**

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Manganese 7439-96-5	-	LC50: >3.6mg/L (96h, <i>Oncorhynchus mykiss</i>)	-	-
Iron oxide (Fe ₂ O ₃) 1309-37-1	-	LC50: =100000mg/L (96h, <i>Danio rerio</i>)	-	-
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, <i>Danio rerio</i>)	-	-
Ethanolamine 141-43-5	EC50: =15mg/L (72h, <i>Desmodesmus subspicatus</i>)	LC50: =227mg/L (96h, <i>Pimephales promelas</i>) LC50: =3684mg/L (96h, <i>Brachydanio rerio</i>) LC50: 300 - 1000mg/L (96h, <i>Lepomis macrochirus</i>) LC50: 114 - 196mg/L (96h, <i>Oncorhynchus mykiss</i>) LC50: >200mg/L (96h,	-	EC50: =65mg/L (48h, <i>Daphnia magna</i>)

		Oncorhynchus mykiss)		
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Persistence and degradability

Bioaccumulation There is no data for this product.

Chemical name	Partition coefficient
Ethanolamine 141-43-5	-1.91

Other adverse effects No information available.

13. Disposal considerations**Disposal methods**

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging Do not reuse empty containers.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information**DOT****Notes**

UN number or ID number

Proper shipping name

Transport hazard class(es)

Packing group

Special Provisions

DOT Marine Pollutant

Description

Emergency Response Guide
Number**No components found suitable for Technical Name.**

UN3082

Environmentally hazardous substance, liquid, n.o.s.

9

III

8, 146, 173, 335, IB3, T4, TP1, TP29

NP

UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III, Marine pollutant

171

TDG**Notes**

UN number or ID number

UN proper shipping name

Transport hazard class(es)

Packing group

Special Provisions

Description

No components found suitable for Technical Name.

UN3082

Environmentally hazardous substance, liquid, n.o.s.

9

III

16, 99

UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III

MEX**Notes**

UN number or ID number

UN proper shipping name

Transport hazard class(es)

Packing group

Description

Special Provisions

No components found suitable for Technical Name.

UN3082

Environmentally hazardous substance, liquid, n.o.s.

9

III

UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III

274, 331, 335

ICAO (air)**Notes****No components found suitable for Technical Name.**

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III
Special Provisions	A97, A158, A197, A215

IATA

Notes	No components found suitable for Technical Name.
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III
Special Provisions	A97, A158, A197
ERG Code	9L

IMDG

Notes	No components found suitable for Technical Name.
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	P
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III, Marine pollutant

RID

Notes	No components found suitable for Technical Name.
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III

ADR

Notes	No components found suitable for Technical Name.
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III, (-)

ADN

Notes	No components found suitable for Technical Name.
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III
Equipment Requirements	PP

15. Regulatory information**International Inventories**

TSCA

Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Bismuth Trioxide	1304-76-3	Present	Active
Quartz	14808-60-7	Present	Active
Nepheline syenite	37244-96-5	-	Unknown *
Manganese	7439-96-5	Present	Active
Calcium molybdate	7789-82-4	Present	Active
Kaolin	1332-58-7	Present	Active
Limestone	1317-65-3	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
Aluminum oxide (Al ₂ O ₃)	1344-28-1	Present	Active
Iron oxide (Fe ₂ O ₃)	1309-37-1	Present	Active
Polyphosphoric acids, sodium salts	68915-31-1	Present	Active
Barium oxide	1304-28-5	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Mica	12001-26-2	-	Unknown *
Titanium dioxide	13463-67-7	Present	Active
Silica, cristobalite	14464-46-1	Present	Active
Ethanolamine	141-43-5	Present	Active

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL

Contact supplier for inventory compliance status.

EINECS/ELINCS

Contact supplier for inventory compliance status.

ENCS

Contact supplier for inventory compliance status.

IECSC

Contact supplier for inventory compliance status.

KECL

Contact supplier for inventory compliance status.

PICCS

Contact supplier for inventory compliance status.

AIIC

Contact supplier for inventory compliance status.

NZIoC

Contact supplier for inventory compliance status.

Legend:**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AIIC** - Australian Inventory of Industrial Chemicals**NZIoC** - New Zealand Inventory of Chemicals**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Manganese - 7439-96-5	1.0
Aluminum oxide (Al ₂ O ₃) - 1344-28-1	1.0
Barium oxide - 1304-28-5	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Quartz 14808-60-7	X	X	X
Manganese 7439-96-5	X	X	X
Kaolin 1332-58-7	X	X	X
Limestone 1317-65-3	X	X	X
Aluminum oxide (Al ₂ O ₃) 1344-28-1	X	X	X
Iron oxide (Fe ₂ O ₃) 1309-37-1	X	X	X
Barium oxide 1304-28-5	X	-	X
Mica 12001-26-2	X	-	X
Titanium dioxide 13463-67-7	X	X	X
Silica, cristobalite 14464-46-1	X	X	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 2	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 2	Flammability 0	Physical hazards 0	Personal protection X

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: Exposure controls/personal protection**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGl(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 24-Oct-2023

Revision Note**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 26-Mar-2024

Revision Number 2

1. Identification

Product identifier

Product Name LUG-1 Black

Other means of identification

Product Code(s) FG00439

UN number or ID number UN3082

Synonyms 41141N, 41169G, 41171H, 41199N

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements**Hazard statements****Danger**

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H350 - May cause cancer

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/clothing and eye/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Contaminated work clothing must not be allowed out of the workplace

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

16.817 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Other information

Harmful to aquatic life with long lasting effects. Toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Spinel, chromium cobalt iron black	68186-97-0	10 - 20
Frits, chemicals	65997-18-4	3 - <5
Quartz	14808-60-7	1 - <3
Kaolin	1332-58-7	1 - <3
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
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Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and storage**Precautions for safe handling****Advice on safe handling**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection**Control parameters****Exposure Limits**

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Spinels, chromium cobalt iron black 68186-97-0	TWA: 0.02 mg/m ³ Co inhalable particulate matter	TWA: 0.5 mg/m ³ Cr (vacated) TWA: 0.5 mg/m ³ Cr	IDLH: 25 mg/m ³ Cr(III) TWA: 0.5 mg/m ³ Cr
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium tetrachloride Zr TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust

		: (10)/(%)SiO ₂ + 2) mg/m ³ TWA respirable fraction	
Kaolin 1332-58-7	TWA: 2 mg/m ³ particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust

Biological occupational exposure limits

Chemical name	ACGIH
Spinels, chromium cobalt iron black 68186-97-0	15 µg/L - urine (Cobalt) - end of shift at end of workweek
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical

Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Physical state	Liquid
Appearance	
Color	
Odor	
Odor threshold	

Property	Values	Remarks • Method
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known

Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties	No information available
Oxidizing properties	No information available
VOC Content (%)	No information available

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Itching. Rashes. Hives.
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Acute toxicity

Numerical measures of toxicity

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	1,684.30 mg/kg
ATEmix (dermal)	28,390.30 mg/kg
ATEmix (inhalation-dust/mist)	24.50 mg/l

Unknown acute toxicity

16.817 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Spinels, chromium cobalt iron black 68186-97-0	-	-	> 5.09 mg/L (Rat) 4 h
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Kaolin 1332-58-7	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rat)	-
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	May cause sensitization by skin contact.
Germ cell mutagenicity	No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Spinels, chromium cobalt iron black 68186-97-0	A3	Group 2B Group 3	Reasonably Anticipated	X
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X
Quartz 14808-60-7	A2	Group 1	Known	X

Legend**ACGIH (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity	No information available.
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STOT - single exposure	No information available.
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STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Target organ effects	Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate, Gastrointestinal tract (GI).
Aspiration hazard	No information available.
Other adverse effects	
Interactive effects	

12. Ecological information

Ecotoxicity Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging Do not reuse empty containers.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

UN number or ID number	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant	PP
Marine pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
Emergency Response Guide Number	171

TDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	16, 99
Marine pollutant name	Frits, chemicals.
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

MEX

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	274, 331, 335

ICAO (air)

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197, A215

IATA

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197
ERG Code	9L

IMDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	P
Marine Pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant

RID

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

ADR

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375

Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, (-)
ADN	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Equipment Requirements	PP

15. Regulatory information

International Inventories

TSCA Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Spinels, chromium cobalt iron black	68186-97-0	Present	Active
Frits, chemicals	65997-18-4	Present	Active
Feldspar	68476-25-5	Present	Active
Kaolin	1332-58-7	Present	Active
Quartz	14808-60-7	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Ethanolamine	141-43-5	Present	Active

DSL/NDL Contact supplier for inventory compliance status.
EINECS/ELINCS Contact supplier for inventory compliance status.
ENCS Contact supplier for inventory compliance status.
IECSC Contact supplier for inventory compliance status.
KECL Contact supplier for inventory compliance status.
PICCS Contact supplier for inventory compliance status.
AIIC Contact supplier for inventory compliance status.
NZIoC Contact supplier for inventory compliance status.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Spinels, chromium cobalt iron black - 68186-97-0	0.1 1.0

Frits, chemicals - 65997-18-4	0.1 1.0
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SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Spinels, chromium cobalt iron black 68186-97-0	-	X	-	-
Frits, chemicals 65997-18-4	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Spinels, chromium cobalt iron black 68186-97-0	X	-	X
Frits, chemicals 65997-18-4	X	-	X
Feldspar 68476-25-5	X	-	X
Kaolin 1332-58-7	X	X	X
Quartz 14808-60-7	X	X	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information**NFPA****HMIS**

Chronic Hazard Star Legend

Health hazards 2

Health hazards 2 *

Flammability 0

Flammability 0

Instability 0

Physical hazards 0

Special hazards -

Personal protection X

* = Chronic Health Hazard

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: Exposure controls/personal protection**

TWA

TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling

Maximum limit value

*

Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date

26-Mar-2024

Revision Note**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 26-Mar-2024

Revision Number 1

1. Identification

Product identifier

Product Name LUG-10 White

Other means of identification

Product Code(s) FG00440

UN number or ID number UN3082

Synonyms 41142P, 41170E, 41172W, 41195J

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Skin sensitization	Category 1
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard statements**Warning**

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Contaminated work clothing must not be allowed out of the workplace

Wear protective gloves

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

Specific treatment (see .? on this label)

Get medical advice/attention if you feel unwell

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

34.337 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Other information

Harmful to aquatic life with long lasting effects. Toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Zircon	14940-68-2	20 - 40
Kaolin	1332-58-7	5 - <10
Quartz	14808-60-7	5 - <10
Frits, chemicals	65997-18-4	5 - <10
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1

4. First-aid measures**Description of first aid measures**

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms Itching. Rashes. Hives.

Indication of any immediate medical attention and special treatment needed

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling**Advice on safe handling**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection**Control parameters****Exposure Limits**

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Zircon 14940-68-2	STEL: 10 mg/m ³ Zr TWA: 5 mg/m ³ Zr	TWA: 5 mg/m ³ Zr (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr	IDLH: 25 mg/m ³ Zr TWA: 5 mg/m ³ except Zirconium tetrachloride Zr STEL: 10 mg/m ³ Zr
Kaolin 1332-58-7	TWA: 2 mg/m ³ particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium tetrachloride Zr TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni

			STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
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Biological occupational exposure limits

Chemical name	ACGIH
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical

Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Physical state	Liquid
Appearance	
Color	
Odor	
Odor threshold	

Property	Values	Remarks • Method
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties	No information available
Oxidizing properties	No information available
VOC Content (%)	No information available

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information**Information on likely routes of exposure****Product Information**

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Itching. Rashes. Hives.
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Acute toxicity**Numerical measures of toxicity**

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	1,266.60 mg/kg
ATEmix (dermal)	15,129.70 mg/kg
ATEmix (inhalation-dust/mist)	16.90 mg/l

Unknown acute toxicity

34.337 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Kaolin 1332-58-7	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rat)	-
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
1,3,5-Triazine-1,3,5-(2H,4H,6H)-triethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	May cause sensitization by skin contact.
Germ cell mutagenicity	No information available.

Carcinogenicity No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Quartz 14808-60-7	A2	Group 1	Known	X
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X

Legend**ACGIH (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Target organ effects	Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate, Gastrointestinal tract (GI).
Aspiration hazard	No information available.
Other adverse effects	
Interactive effects	

12. Ecological information

Ecotoxicity	Toxic to aquatic life. Harmful to aquatic life with long lasting effects.
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Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations**Disposal methods**

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging Do not reuse empty containers.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information**DOT**

UN number or ID number UN3082
Proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Special Provisions 8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant PP
Marine pollutant Frits, chemicals
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
Emergency Response Guide Number 171

TDG

UN number or ID number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Special Provisions 16, 99
Marine pollutant name Frits, chemicals.
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

MEX

UN number or ID number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Technical Name Frits, chemicals
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions 274, 331, 335

ICAO (air)

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197, A215

IATA

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197
ERG Code	9L

IMDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	P
Marine Pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant

RID

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

ADR

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, (-)

ADN

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Equipment Requirements	PP

15. Regulatory information**International Inventories****TSCA**

Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Zircon	14940-68-2	Present	Active
Kaolin	1332-58-7	Present	Active
Quartz	14808-60-7	Present	Active
Feldspar	68476-25-5	Present	Active
Frits, chemicals	65997-18-4	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Ethanolamine	141-43-5	Present	Active

DSL/NDSL

Contact supplier for inventory compliance status.

EINECS/ELINCS

Contact supplier for inventory compliance status.

ENCS

Contact supplier for inventory compliance status.

IECSC

Contact supplier for inventory compliance status.

KECL

Contact supplier for inventory compliance status.

PICCS

Contact supplier for inventory compliance status.

AIIC

Contact supplier for inventory compliance status.

NZIoC

Contact supplier for inventory compliance status.

Legend:**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AIIC** - Australian Inventory of Industrial Chemicals**NZIoC** - New Zealand Inventory of Chemicals**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Frits, chemicals - 65997-18-4	0.1 1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Frits, chemicals 65997-18-4	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Kaolin 1332-58-7	X	X	X
Quartz 14808-60-7	X	X	X
Feldspar 68476-25-5	X	-	X
Frits, chemicals 65997-18-4	X	-	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 2	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 2 *	Flammability 0	Physical hazards 0	Personal protection X

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: Exposure controls/personal protection**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AELG(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

Revision date 26-Mar-2024

Revision Note**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage,

transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 26-Mar-2024

Revision Number 1

1. Identification

Product identifier

Product Name LUG-21 Medium Blue

Other means of identification

Product Code(s) FG00443

UN number or ID number UN3082

Synonyms 41145B, 41102F, 41175A

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements**Hazard statements****Danger**

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H350 - May cause cancer

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/clothing and eye/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Contaminated work clothing must not be allowed out of the workplace

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

33.81405 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Other information

Harmful to aquatic life with long lasting effects. Toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
C.I. Pigment Blue 72	68186-87-8	10 - 20
Quartz	14808-60-7	5 - <10
Kaolin	1332-58-7	5 - <10
Frits, chemicals	65997-18-4	5 - <10
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
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Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and storage**Precautions for safe handling****Advice on safe handling**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection**Control parameters****Exposure Limits**

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
C.I. Pigment Blue 72 68186-87-8	TWA: 0.02 mg/m ³ Co inhalable particulate matter	-	-
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust
Kaolin 1332-58-7	TWA: 2 mg/m ³ particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist

			TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium tetrachloride Zr TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
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Biological occupational exposure limits

Chemical name	ACGIH
C.I. Pigment Blue 72 68186-87-8	15 µg/L - urine (Cobalt) - end of shift at end of workweek
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical

Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Physical state	Liquid
Appearance	
Color	
Odor	
Odor threshold	

Property	Values	Remarks • Method
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known

Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties	No information available
Oxidizing properties	No information available
VOC Content (%)	No information available

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information**Information on likely routes of exposure****Product Information**

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Itching. Rashes. Hives.
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Acute toxicity**Numerical measures of toxicity**

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	722.50 mg/kg
ATEmix (dermal)	10,512.40 mg/kg
ATEmix (inhalation-dust/mist)	9.55 mg/l

Unknown acute toxicity

33.81405 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
C.I. Pigment Blue 72 68186-87-8	-	-	> 5.06 mg/L (Rat) 4 h
Kaolin 1332-58-7	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rat)	-
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause sensitization by skin contact.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
C.I. Pigment Blue 72 68186-87-8	A3	Group 2B	Reasonably Anticipated	X
Quartz 14808-60-7	A2	Group 1	Known	X
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X

Legend**ACGIH (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Target organ effects Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central

Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate, Gastrointestinal tract (GI).

Aspiration hazard No information available.

Other adverse effects

Interactive effects

12. Ecological information

Ecotoxicity Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging Do not reuse empty containers.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

UN number or ID number UN3082
Proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Special Provisions 8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant PP
Marine pollutant Frits, chemicals
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
Emergency Response Guide Number 171

TDG

UN number or ID number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9

Packing group	III
Special Provisions	16, 99
Marine pollutant name	Frits, chemicals.
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

MEX

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	274, 331, 335

ICAO (air)

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197, A215

IATA

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197
ERG Code	9L

IMDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	P
Marine Pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant

RID

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

ADR

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, (-)

ADN

UN number or ID number	UN3082
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UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Equipment Requirements	PP

15. Regulatory information

International Inventories

TSCA Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
C.I. Pigment Blue 72	68186-87-8	Present	Active
Feldspar	68476-25-5	Present	Active
Kaolin	1332-58-7	Present	Active
Quartz	14808-60-7	Present	Active
Frits, chemicals	65997-18-4	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
Sodium benzoate	532-32-1	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Hectorite	12173-47-6	-	Unknown *
Ethanolamine	141-43-5	Present	Active

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
C.I. Pigment Blue 72 - 68186-87-8	1.0 0.1
Frits, chemicals - 65997-18-4	0.1

	1.0
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SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
C.I. Pigment Blue 72 68186-87-8	-	X	-	-
Frits, chemicals 65997-18-4	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
C.I. Pigment Blue 72 68186-87-8	X	-	X
Feldspar 68476-25-5	X	-	X
Kaolin 1332-58-7	X	X	X
Quartz 14808-60-7	X	X	X
Frits, chemicals 65997-18-4	X	-	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information**NFPA**

Health hazards 2

Flammability 0

Instability 0

Special hazards -

HMIS

Health hazards 2 *

Flammability 0

Physical hazards 0

Personal protection X

Chronic Hazard Star Legend

* = Chronic Health Hazard

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: Exposure controls/personal protection**

TWA TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling Maximum limit value

*

Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 26-Mar-2024

Revision Note

Disclaimer

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End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 26-Mar-2024

Revision Number 1

1. Identification

Product identifier

Product Name LUG-26 Aqua

Other means of identification

Product Code(s) FG00446

UN number or ID number UN3082

Synonyms 41148H, 41112T, 41178D

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Skin sensitization	Category 1
Carcinogenicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard statements**Danger**

H317 - May cause an allergic skin reaction

H350 - May cause cancer

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/clothing and eye/face protection

Contaminated work clothing must not be allowed out of the workplace

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other information

May be harmful if swallowed. Harmful to aquatic life with long lasting effects. Toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Kaolin	1332-58-7	10 - 20
Quartz	14808-60-7	10 - 20
Frits, chemicals	65997-18-4	3 - <5
C.I. Pigment Blue 36	68187-11-1	0.1 - 1
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1

4. First-aid measures**Description of first aid measures****General advice**

Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.

Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Rinse mouth.

Most important symptoms and effects, both acute and delayed

Symptoms Itching. Rashes. Hives.

Indication of any immediate medical attention and special treatment needed

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. Handling and storage**Precautions for safe handling**

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection**Control parameters****Exposure Limits**

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Kaolin 1332-58-7	TWA: 2 mg/m ³ particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium tetrachloride Zr TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
C.I. Pigment Blue 36 68187-11-1	TWA: 0.02 mg/m ³ Co inhalable particulate matter	TWA: 0.5 mg/m ³ Cr (vacated) TWA: 0.5 mg/m ³ Cr	IDLH: 25 mg/m ³ Cr(III) TWA: 0.5 mg/m ³ Cr

Biological occupational exposure limits

Chemical name	ACGIH
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical
C.I. Pigment Blue 36 68187-11-1	15 µg/L - urine (Cobalt) - end of shift at end of workweek

Appropriate engineering controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Physical state Liquid

Appearance

Color

Odor

Odor threshold

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties No information available

Oxidizing properties	No information available
VOC Content (%)	No information available

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	May be harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Itching. Rashes. Hives.
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Acute toxicity

Numerical measures of toxicity

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	2,304.20 mg/kg
ATEmix (dermal)	19,083.00 mg/kg
ATEmix (inhalation-dust/mist)	31.30 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Kaolin 1332-58-7	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rat)	-
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
C.I. Pigment Blue 36 68187-11-1	-	-	> 5.05 mg/L (Rat) 4 h
1,3,5-Triazine-1,3,5(2H,4H,6H)-t riethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	No information available.
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Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause sensitization by skin contact.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Quartz 14808-60-7	A2	Group 1	Known	X
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X
C.I. Pigment Blue 36 68187-11-1	A3	Group 2B Group 3	Reasonably Anticipated	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Target organ effects Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate, Gastrointestinal tract (GI).

Aspiration hazard No information available.

Other adverse effects

Interactive effects

12. Ecological information

Ecotoxicity Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability**Bioaccumulation**

There is no data for this product.

Other adverse effects

No information available.

13. Disposal considerations**Disposal methods****Waste from residues/unused products**

Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging

Do not reuse empty containers.

California Hazardous Waste Status

This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information**DOT**

UN number or ID number	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant	PP
Marine pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
Emergency Response Guide Number	171

TDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	16, 99
Marine pollutant name	Frits, chemicals.
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

MEX

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	274, 331, 335

ICAO (air)

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197, A215

IATA

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197
ERG Code	9L

IMDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	P
Marine Pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant

RID

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

ADR

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, (-)

ADN

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Equipment Requirements	PP

15. Regulatory information**International Inventories**

TSCA

Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Kaolin	1332-58-7	Present	Active
Quartz	14808-60-7	Present	Active
Nepheline syenite	37244-96-5	-	Unknown *
Frits, chemicals	65997-18-4	Present	Active
C.I. Pigment Green 51	68553-01-5	Present	Inactive
Smectite-group minerals	12199-37-0	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
C.I. Pigment Blue 36	68187-11-1	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Ethanolamine	141-43-5	Present	Active

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Frits, chemicals - 65997-18-4	0.1 1.0
C.I. Pigment Blue 36 - 68187-11-1	0.1 1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Frits, chemicals 65997-18-4	-	X	-	-

C.I. Pigment Blue 36 68187-11-1	-	X	-	-
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CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Kaolin 1332-58-7	X	X	X
Quartz 14808-60-7	X	X	X
Frits, chemicals 65997-18-4	X	-	X
C.I. Pigment Green 51 68553-01-5	X	-	X
C.I. Pigment Blue 36 68187-11-1	X	-	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 2	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 2 *	Flammability 0	Physical hazards 0	Personal protection X
<i>Chronic Hazard Star Legend</i>		* = Chronic Health Hazard		

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: Exposure controls/personal protection**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 26-Mar-2024

Revision Note

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 26-Mar-2024

Revision Number 1

1. Identification

Product identifier

Product Name LUG-40 Chartreuse

Other means of identification

Product Code(s) FG00449

UN number or ID number UN3082

Synonyms 41151Y, 41115X, 41181G

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Skin sensitization	Category 1
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard statements**Warning**

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Contaminated work clothing must not be allowed out of the workplace

Wear protective gloves

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

Specific treatment (see .? on this label)

Get medical advice/attention if you feel unwell

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

12.637 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Other information

Harmful to aquatic life with long lasting effects. Toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Kaolin	1332-58-7	10 - 20
C.I. Pigment Yellow 159	68187-15-5	5 - <10
Frits, chemicals	65997-18-4	5 - <10
C.I. Pigment Blue 71	68186-95-8	1 - <3
Quartz	14808-60-7	1 - <3
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1

4. First-aid measures**Description of first aid measures**

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms Itching. Rashes. Hives.

Indication of any immediate medical attention and special treatment needed

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling**Advice on safe handling**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection**Control parameters****Exposure Limits**

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Kaolin 1332-58-7	TWA: 2 mg/m ³ particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
C.I. Pigment Yellow 159 68187-15-5	STEL: 10 mg/m ³ Zr TWA: 5 mg/m ³ Zr	TWA: 5 mg/m ³ Zr (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr	IDLH: 25 mg/m ³ Zr TWA: 5 mg/m ³ except Zirconium tetrachloride Zr STEL: 10 mg/m ³ Zr
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium tetrachloride Zr TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
C.I. Pigment Blue 71 68186-95-8	STEL: 10 mg/m ³ Zr TWA: 5 mg/m ³ Zr	TWA: 5 mg/m ³ Zr (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr	IDLH: 25 mg/m ³ Zr Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 5 mg/m ³ except Zirconium

			tetrachloride Zr STEL: 10 mg/m ³ Zr
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust

Biological occupational exposure limits

Chemical name	ACGIH
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical

Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Physical state	Liquid
Appearance	
Color	
Odor	
Odor threshold	

Property	Values	Remarks • Method
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known

Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties	No information available
Oxidizing properties	No information available
VOC Content (%)	No information available

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information**Information on likely routes of exposure****Product Information**

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Itching. Rashes. Hives.
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Acute toxicity**Numerical measures of toxicity**

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	1,264.30 mg/kg
ATEmix (dermal)	15,233.30 mg/kg
ATEmix (inhalation-dust/mist)	16.90 mg/l

Unknown acute toxicity

12.637 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Kaolin	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rat)	-

1332-58-7			
C.I. Pigment Yellow 159 68187-15-5	-	-	> 5.5 mg/L (Rat) 4 h
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
C.I. Pigment Blue 71 68186-95-8	-	-	> 5.1 mg/L (Rat) 4 h
1,3,5-Triazine-1,3,5-(2H,4H,6H)-triethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause sensitization by skin contact.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X
Quartz 14808-60-7	A2	Group 1	Known	X

Legend**ACGIH (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Target organ effects Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate, Gastrointestinal tract (GI).

Aspiration hazard No information available.

Other adverse effects

Interactive effects

12. Ecological information

Ecotoxicity Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging Do not reuse empty containers.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

UN number or ID number UN3082
Proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Special Provisions 8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant PP
Marine pollutant Frits, chemicals
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
Emergency Response Guide Number 171

TDG

UN number or ID number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Special Provisions 16, 99
Marine pollutant name Frits, chemicals.

Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
<u>MEX</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	274, 331, 335
<u>ICAO (air)</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197, A215
<u>IATA</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197
ERG Code	9L
<u>IMDG</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	P
Marine Pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
<u>RID</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
<u>ADR</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, (-)
<u>ADN</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III

Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Equipment Requirements	PP

15. Regulatory information

International Inventories

TSCA

Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Kaolin	1332-58-7	Present	Active
C.I. Pigment Yellow 159	68187-15-5	Present	Active
Frits, chemicals	65997-18-4	Present	Active
C.I. Pigment Blue 71	68186-95-8	Present	Active
Feldspar	68476-25-5	Present	Active
Quartz	14808-60-7	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Ethanolamine	141-43-5	Present	Active

DSL/NDSL

Contact supplier for inventory compliance status.

EINECS/ELINCS

Contact supplier for inventory compliance status.

ENCS

Contact supplier for inventory compliance status.

IECSC

Contact supplier for inventory compliance status.

KECL

Contact supplier for inventory compliance status.

PICCS

Contact supplier for inventory compliance status.

AIIC

Contact supplier for inventory compliance status.

NZIoC

Contact supplier for inventory compliance status.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Frits, chemicals - 65997-18-4	0.1
	1.0
C.I. Pigment Blue 71 - 68186-95-8	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Frits, chemicals 65997-18-4	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Kaolin 1332-58-7	X	X	X
Frits, chemicals 65997-18-4	X	-	X
C.I. Pigment Blue 71 68186-95-8	X	-	-
Feldspar 68476-25-5	X	-	X
Quartz 14808-60-7	X	X	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 2	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 2 *	Flammability 0	Physical hazards 0	Personal protection X

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: Exposure controls/personal protection**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)

National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 26-Mar-2024

Revision Note

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 26-Mar-2024

Revision Number 1

1. Identification

Product identifier

Product Name LUG-41 Warm Green

Other means of identification

Product Code(s) FG00450

UN number or ID number UN3082

Synonyms 41152A, 41182H

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Skin sensitization	Category 1
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard statements**Warning**

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Contaminated work clothing must not be allowed out of the workplace

Wear protective gloves

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

Specific treatment (see .? on this label)

Get medical advice/attention if you feel unwell

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

34.317 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Other information

Harmful to aquatic life with long lasting effects. Toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
C.I. Pigment Green 51	68553-01-5	10 - 20
Quartz	14808-60-7	5 - <10
Kaolin	1332-58-7	5 - <10
Frits, chemicals	65997-18-4	5 - <10
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1

4. First-aid measures**Description of first aid measures**

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms Itching. Rashes. Hives.

Indication of any immediate medical attention and special treatment needed

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling**Advice on safe handling**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection**Control parameters****Exposure Limits**

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
C.I. Pigment Green 51 68553-01-5	-	TWA: 0.5 mg/m ³ Cr (vacated) TWA: 0.5 mg/m ³ Cr	IDLH: 25 mg/m ³ Cr(III) TWA: 0.5 mg/m ³ Cr
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust
Kaolin 1332-58-7	TWA: 2 mg/m ³ particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium tetrachloride Zr TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr

Biological occupational exposure limits

Chemical name	ACGIH
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical

Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Physical state Liquid

Appearance

Color

Odor

Odor threshold

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties No information available

Oxidizing properties	No information available
VOC Content (%)	No information available

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Itching. Rashes. Hives.
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Acute toxicity

Numerical measures of toxicity

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	899.40 mg/kg
ATEmix (dermal)	13,105.10 mg/kg
ATEmix (inhalation-dust/mist)	12.30 mg/l

Unknown acute toxicity

34.317 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Kaolin 1332-58-7	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rat)	-
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	May cause sensitization by skin contact.
Germ cell mutagenicity	No information available.

Carcinogenicity No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
C.I. Pigment Green 51 68553-01-5	-	Group 3	-	-
Quartz 14808-60-7	A2	Group 1	Known	X
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Target organ effects	Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate, Gastrointestinal tract (GI).
Aspiration hazard	No information available.
Other adverse effects	
Interactive effects	

12. Ecological information

Ecotoxicity	Toxic to aquatic life. Harmful to aquatic life with long lasting effects.
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Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability**Bioaccumulation**

There is no data for this product.

Other adverse effects

No information available.

13. Disposal considerations**Disposal methods****Waste from residues/unused products**

Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging

Do not reuse empty containers.

California Hazardous Waste Status

This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information**DOT**

UN number or ID number	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant	PP
Marine pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
Emergency Response Guide Number	171

TDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	16, 99
Marine pollutant name	Frits, chemicals.
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

MEX

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	274, 331, 335

ICAO (air)

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197, A215

IATA

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197
ERG Code	9L

IMDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	P
Marine Pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant

RID

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

ADR

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, (-)

ADN

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Equipment Requirements	PP

15. Regulatory information**International Inventories****TSCA**

Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
C.I. Pigment Green 51	68553-01-5	Present	Inactive
Frits, chemicals	65997-18-4	Present	Active
Feldspar	68476-25-5	Present	Active
Kaolin	1332-58-7	Present	Active
Quartz	14808-60-7	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Ethanolamine	141-43-5	Present	Active

DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.

Legend:**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AIIC** - Australian Inventory of Industrial Chemicals**NZIoC** - New Zealand Inventory of Chemicals**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
C.I. Pigment Green 51 - 68553-01-5	1.0
Frits, chemicals - 65997-18-4	0.1
	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
C.I. Pigment Green 51 68553-01-5	-	X	-	-
Frits, chemicals 65997-18-4	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
C.I. Pigment Green 51 68553-01-5	X	-	X
Frits, chemicals 65997-18-4	X	-	X
Feldspar 68476-25-5	X	-	X
Kaolin 1332-58-7	X	X	X
Quartz 14808-60-7	X	X	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 2	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 2 *	Flammability 0	Physical hazards 0	Personal protection X

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AELG(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

Revision date 26-Mar-2024

Revision Note

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 26-Mar-2024

Revision Number 1

1. Identification

Product identifier

Product Name LUG-58 Dark Red

Other means of identification

Product Code(s) FG00460

UN number or ID number UN3082

Synonyms 41122H, 41123J

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 1A
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements**Hazard statements****Danger**

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H350 - May cause cancer

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/clothing and eye/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Contaminated work clothing must not be allowed out of the workplace

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

21.88625 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Other information

Toxic to aquatic life with long lasting effects. Toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Quartz	14808-60-7	10 - 20
Kaolin	1332-58-7	10 - 20
Frits, chemicals	65997-18-4	5 - <10
Zircon, cadmium red	72828-62-7	5 - <10
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
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Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and storage**Precautions for safe handling****Advice on safe handling**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection**Control parameters****Exposure Limits**

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust
Kaolin 1332-58-7	TWA: 2 mg/m ³ particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium

			tetrachloride Zr TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
Zircon, cadmium red 72828-62-7	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.2 mg/m ³ Se TWA: 5 mg/m ³ Zr	TWA: 0.2 mg/m ³ Se TWA: 5 mg/m ³ Zr (vacated) TWA: 0.2 mg/m ³ Se (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr	IDLH: 9 mg/m ³ Cd dust and fume IDLH: 1 mg/m ³ Se IDLH: 25 mg/m ³ Zr TWA: 0.2 mg/m ³ except Selenium hexafluoride Se TWA: 5 mg/m ³ except Zirconium tetrachloride Zr STEL: 10 mg/m ³ Zr

Biological occupational exposure limits

Chemical name	ACGIH
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical
Zircon, cadmium red 72828-62-7	5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical

Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Physical state	Liquid
Appearance	
Color	
Odor	
Odor threshold	

Property	Values	Remarks • Method
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known

Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties	No information available
Oxidizing properties	No information available
VOC Content (%)	No information available

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information**Information on likely routes of exposure****Product Information**

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Itching. Rashes. Hives.
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Acute toxicity

Numerical measures of toxicity
No information available

The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (oral) 468.30 mg/kg

ATEmix (dermal) 5,793.10 mg/kg
 ATEmix (inhalation-dust/mist) 6.12 mg/l

Unknown acute toxicity

21.88625 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Kaolin 1332-58-7	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rat)	-
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause sensitization by skin contact.

Germ cell mutagenicity No information available.

Carcinogenicity

Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Quartz 14808-60-7	A2	Group 1	Known	X
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X
Zircon, cadmium red 72828-62-7	A2	Group 1 Group 3	Known	X

Legend**ACGIH (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Target organ effects	Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate, Gastrointestinal tract (GI).
Aspiration hazard	No information available.
Other adverse effects	
Interactive effects	

12. Ecological information

Ecotoxicity	Toxic to aquatic life. Toxic to aquatic life with long lasting effects.
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Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability

Bioaccumulation	There is no data for this product.
Other adverse effects	No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products	Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.
Contaminated packaging	Do not reuse empty containers.
California Hazardous Waste Status	This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

UN number or ID number	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant	PP
Marine pollutant	Frits, chemicals, Zircon, cadmium red
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zircon, cadmium red), 9, III, Marine pollutant
Emergency Response Guide	171

Number**TDG**

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	16, 99
Marine pollutant name	Frits, chemicals, Zircon, cadmium red.
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zircon, cadmium red), 9, III

MEX

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals, Zircon, cadmium red
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zircon, cadmium red), 9, III
Special Provisions	274, 331, 335

ICAO (air)

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zircon, cadmium red), 9, III
Special Provisions	A97, A158, A197, A215

IATA

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals, Zircon, cadmium red
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zircon, cadmium red), 9, III
Special Provisions	A97, A158, A197
ERG Code	9L

IMDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	P
Marine Pollutant	Frits, chemicals, Zircon, cadmium red
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zircon, cadmium red), 9, III, Marine pollutant

RID

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zircon, cadmium red), 9, III

ADR

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zircon, cadmium red), 9, III, (-)

ADN

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zircon, cadmium red), 9, III
Equipment Requirements	PP

15. Regulatory information**International Inventories****TSCA**

Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Kaolin	1332-58-7	Present	Active
Quartz	14808-60-7	Present	Active
Nepheline syenite	37244-96-5	-	Unknown *
Frits, chemicals	65997-18-4	Present	Active
Zircon, cadmium red	72828-62-7	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
Ethanolamine	141-43-5	Present	Active

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL**EINECS/ELINCS****ENCS****IECSC****KECL****PICCS****AIIC****NZIoC**

Contact supplier for inventory compliance status.

Contact supplier for inventory compliance status.

Contact supplier for inventory compliance status.

Contact supplier for inventory compliance status.

Contact supplier for inventory compliance status.

Contact supplier for inventory compliance status.

Contact supplier for inventory compliance status.

Contact supplier for inventory compliance status.

Legend:**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AIIC** - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Frits, chemicals - 65997-18-4	0.1 1.0
Zircon, cadmium red - 72828-62-7	0.1 1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Frits, chemicals 65997-18-4	-	X	-	-
Zircon, cadmium red 72828-62-7	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Kaolin 1332-58-7	X	X	X
Quartz 14808-60-7	X	X	X
Frits, chemicals 65997-18-4	X	-	X
Zircon, cadmium red 72828-62-7	X	-	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 2	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 2 *	Flammability 0	Physical hazards 0	Personal protection X
<i>Chronic Hazard Star Legend</i>		<i>* = Chronic Health Hazard</i>		

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: Exposure controls/personal protection**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

Revision date 26-Mar-2024

Revision Note**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 26-Mar-2024

Revision Number 1

1. Identification

Product identifier

Product Name LUG-61 Bright Yellow

Other means of identification

Product Code(s) FG00462

UN number or ID number UN3082

Synonyms 41163M, 41193E

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Skin sensitization	Category 1
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard statements**Warning**

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Contaminated work clothing must not be allowed out of the workplace

Wear protective gloves

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

Specific treatment (see .? on this label)

Get medical advice/attention if you feel unwell

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

34.967 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Other information

Harmful to aquatic life with long lasting effects. Toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
C.I. Pigment Yellow 159	68187-15-5	10 - 20
Quartz	14808-60-7	5 - <10
Kaolin	1332-58-7	5 - <10
Frits, chemicals	65997-18-4	3 - <5
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1

4. First-aid measures**Description of first aid measures**

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms Itching. Rashes. Hives.

Indication of any immediate medical attention and special treatment needed

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling**Advice on safe handling**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection**Control parameters****Exposure Limits**

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
C.I. Pigment Yellow 159 68187-15-5	STEL: 10 mg/m ³ Zr TWA: 5 mg/m ³ Zr	TWA: 5 mg/m ³ Zr (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr	IDLH: 25 mg/m ³ Zr TWA: 5 mg/m ³ except Zirconium tetrachloride Zr STEL: 10 mg/m ³ Zr
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust
Kaolin 1332-58-7	TWA: 2 mg/m ³ particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium tetrachloride Zr TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni

			STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
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Biological occupational exposure limits

Chemical name	ACGIH
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical

Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Physical state	Liquid
Appearance	
Color	
Odor	
Odor threshold	

Property	Values	Remarks • Method
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties	No information available
Oxidizing properties	No information available
VOC Content (%)	No information available

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information**Information on likely routes of exposure****Product Information**

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Itching. Rashes. Hives.
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Acute toxicity**Numerical measures of toxicity**

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	1,417.00 mg/kg
ATEmix (dermal)	15,517.30 mg/kg
ATEmix (inhalation-dust/mist)	18.80 mg/l

Unknown acute toxicity

34.967 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
C.I. Pigment Yellow 159 68187-15-5	-	-	> 5.5 mg/L (Rat) 4 h
Kaolin 1332-58-7	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rat)	-
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
1,3,5-Triazine-1,3,5(2H,4H,6H)-t riethanol	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

4719-04-4			
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	May cause sensitization by skin contact.
Germ cell mutagenicity	No information available.

Carcinogenicity No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Quartz 14808-60-7	A2	Group 1	Known	X
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X

Legend**ACGIH (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Target organ effects	Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate, Gastrointestinal tract (GI).
Aspiration hazard	No information available.
Other adverse effects	
Interactive effects	

12. Ecological information

Ecotoxicity Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging Do not reuse empty containers.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

UN number or ID number UN3082
Proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Special Provisions 8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant PP
Marine pollutant Frits, chemicals
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
Emergency Response Guide Number 171

TDG

UN number or ID number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Special Provisions 16, 99
Marine pollutant name Frits, chemicals.
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

MEX

UN number or ID number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Technical Name Frits, chemicals
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions 274, 331, 335

ICAO (air)

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197, A215

IATA

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197
ERG Code	9L

IMDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	P
Marine Pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant

RID

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

ADR

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, (-)

ADN

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Equipment Requirements	PP

15. Regulatory information**International Inventories**

TSCA

Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
C.I. Pigment Yellow 159	68187-15-5	Present	Active
Feldspar	68476-25-5	Present	Active
Kaolin	1332-58-7	Present	Active
Quartz	14808-60-7	Present	Active
Frits, chemicals	65997-18-4	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
Ethanolamine	141-43-5	Present	Active

DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.

Legend:**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AIIC** - Australian Inventory of Industrial Chemicals**NZIoC** - New Zealand Inventory of Chemicals**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Frits, chemicals - 65997-18-4	0.1 1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Frits, chemicals 65997-18-4	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and

Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Feldspar 68476-25-5	X	-	X
Kaolin 1332-58-7	X	X	X
Quartz 14808-60-7	X	X	X
Frits, chemicals 65997-18-4	X	-	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 2	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 2 *	Flammability 0	Physical hazards 0	Personal protection X

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

Revision date

26-Mar-2024

Revision Note

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 10-Apr-2024

Revision Number 1

1. Identification

Product identifier

Product Name PC-68 Golden Honey

Other means of identification

Product Code(s) FG00872

UN number or ID number UN3082

Synonyms 35489L

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard statements**Warning**

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H351 - Suspected of causing cancer

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/clothing and eye/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Contaminated work clothing must not be allowed out of the workplace

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

22.913 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Other information

Harmful to aquatic life with long lasting effects. Toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Frits, chemicals	65997-18-4	10 - 20
Kaolin	1332-58-7	5 - <10
Limestone	1317-65-3	3 - <5
Titanium dioxide	13463-67-7	3 - <5
Quartz	14808-60-7	1 - <3
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium tetrachloride Zr TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
Kaolin 1332-58-7	TWA: 2 mg/m ³ particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ total	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust

		dust (vacated) TWA: 5 mg/m ³ respirable fraction	
Limestone 1317-65-3	-	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³ TWA: 2.4 mg/m ³ CIB 63 fine TWA: 0.3 mg/m ³ CIB 63 ultrafine, including engineered nanoscale
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/((%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/((%SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust

Biological occupational exposure limits

Chemical name	ACGIH
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical

Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Physical state	Liquid
Appearance	
Color	
Odor	
Odor threshold	

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
<u>Other information</u>		
Explosive properties	No information available	
Oxidizing properties	No information available	
VOC Content (%)	No information available	

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Itching. Rashes. Hives.
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Acute toxicity**Numerical measures of toxicity**

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	495.90 mg/kg
ATEmix (dermal)	8,364.70 mg/kg
ATEmix (inhalation-dust/mist)	6.50 mg/l

Unknown acute toxicity

22.913 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Kaolin 1332-58-7	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rat)	-
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	= 5.09 mg/L (Rat) 4 h
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation** No information available.**Serious eye damage/eye irritation** No information available.**Respiratory or skin sensitization** May cause an allergic skin reaction.**Germ cell mutagenicity** No information available.**Carcinogenicity**

Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X
Titanium dioxide 13463-67-7	-	Group 2B	-	X
Quartz 14808-60-7	A2	Group 1	Known	X

Legend**ACGIH (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Target organ effects	Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate, Gastrointestinal tract (GI).
Aspiration hazard	No information available.
Other adverse effects	
Interactive effects	

12. Ecological information

Ecotoxicity Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging Do not reuse empty containers.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

UN number or ID number	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant	PP
Marine pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
Emergency Response Guide Number	171

TDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	16, 99
Marine pollutant name	Frits, chemicals.
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

MEX

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	274, 331, 335

ICAO (air)

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197, A215

IATA

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197
ERG Code	9L

IMDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	P
Marine Pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant

RID

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.

Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

ADR

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, (-)

ADN

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Equipment Requirements	PP

15. Regulatory information

International Inventories**TSCA**

Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Frits, chemicals	65997-18-4	Present	Active
Spodumene (AlLi(SiO ₃) ₂)	1302-37-0	Present	Active
Kaolin	1332-58-7	Present	Active
Limestone	1317-65-3	Present	Active
Titanium dioxide	13463-67-7	Present	Active
Quartz	14808-60-7	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
Aluminum oxide (Al ₂ O ₃)	1344-28-1	Present	Active
Polyphosphoric acids, sodium salts	68915-31-1	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Mica	12001-26-2	-	Unknown *
Silica, cristobalite	14464-46-1	Present	Active
Ethanolamine	141-43-5	Present	Active

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL**EINECS/ELINCS****ENCS****IECSC****KECL****PICCS**

Contact supplier for inventory compliance status.

Contact supplier for inventory compliance status.

Contact supplier for inventory compliance status.

Contact supplier for inventory compliance status.

Contact supplier for inventory compliance status.

Contact supplier for inventory compliance status.

AIIC Contact supplier for inventory compliance status.
NZIoC Contact supplier for inventory compliance status.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Frits, chemicals - 65997-18-4	0.1 1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Frits, chemicals 65997-18-4	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Frits, chemicals 65997-18-4	X	-	X
Kaolin 1332-58-7	X	X	X
Limestone 1317-65-3	X	X	X
Titanium dioxide 13463-67-7	X	X	X
Quartz 14808-60-7	X	X	X
Aluminum oxide (Al ₂ O ₃)	X	X	X

1344-28-1			
Mica 12001-26-2	X	-	X
Silica, cristobalite 14464-46-1	X	X	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA Health hazards 2 Flammability 0 Instability 0 Special hazards -
HMIS Health hazards 2 * Flammability 0 Physical hazards 0 Personal protection X
*Chronic Hazard Star Legend * = Chronic Health Hazard*

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: Exposure controls/personal protection**

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)
Ceiling Maximum limit value * Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGl(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 10-Apr-2024

Revision Note**Disclaimer**

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End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 11-Apr-2024

Revision Number 1

1. Identification

Product identifier

Product Name PC-72 Fire & Ice

Other means of identification

Product Code(s) FG00873

UN number or ID number UN3082

Synonyms 35488K

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard statements**Danger**

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H350 - May cause cancer

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/clothing and eye/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Contaminated work clothing must not be allowed out of the workplace

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

35.9728 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Other information

Toxic to aquatic life with long lasting effects. Toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Frits, chemicals	65997-18-4	10 - 20
Quartz	14808-60-7	10 - 20
Limestone	1317-65-3	5 - <10
Kaolin	1332-58-7	3 - <5
C.I. Pigment Blue 28	1345-16-0	0.1 - 1
Copper(II) carbonate hydroxide	12069-69-1	0.1 - 1

1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1
Titanium dioxide	13463-67-7	0.1 - 1

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage**Precautions for safe handling**

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection**Control parameters**

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium tetrachloride Zr TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable

		respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	dust
Limestone 1317-65-3	-	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Kaolin 1332-58-7	TWA: 2 mg/m ³ particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
C.I. Pigment Blue 28 1345-16-0	TWA: 0.02 mg/m ³ Co inhalable particulate matter TWA: 1 mg/m ³ respirable particulate matter	-	-
Copper(II) carbonate hydroxide 12069-69-1	TWA: 1 mg/m ³ Cu dust and mist	-	IDLH: 100 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Cu dust and mist
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³ TWA: 2.4 mg/m ³ CIB 63 fine TWA: 0.3 mg/m ³ CIB 63 ultrafine, including engineered nanoscale

Biological occupational exposure limits

Chemical name	ACGIH
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical
C.I. Pigment Blue 28 1345-16-0	15 µg/L - urine (Cobalt) - end of shift at end of workweek

Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid

Appearance

Color

Odor

Odor threshold

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties No information available

Oxidizing properties No information available

VOC Content (%) No information available

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives.

Acute toxicity

Numerical measures of toxicity

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	436.40 mg/kg
ATEmix (dermal)	7,813.20 mg/kg
ATEmix (inhalation-dust/mist)	6.12 mg/l

Unknown acute toxicity

35.9728 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Kaolin 1332-58-7	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rat)	-
Copper(II) carbonate hydroxide 12069-69-1	= 1350 mg/kg (Rat) = 1495 mg/kg (Rat)	> 2000 mg/kg (Rat)	= 1.2 mg/L (Rat) 4 h
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	= 5.09 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No information available.

Carcinogenicity

Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X
Quartz 14808-60-7	A2	Group 1	Known	X

C.I. Pigment Blue 28 1345-16-0	A3	Group 2B	Reasonably Anticipated	X
Titanium dioxide 13463-67-7	-	Group 2B	-	X

Legend**ACGIH (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.**STOT - single exposure** No information available.**STOT - repeated exposure** May cause damage to organs through prolonged or repeated exposure.**Target organ effects** Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate, Gastrointestinal tract (GI).**Aspiration hazard** No information available.**Other adverse effects****Interactive effects****12. Ecological information****Ecotoxicity** Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability**Bioaccumulation** There is no data for this product.**Other adverse effects** No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products	Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.
Contaminated packaging	Do not reuse empty containers.
California Hazardous Waste Status	This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

UN number or ID number	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant	PP
Marine pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
Emergency Response Guide Number	171

TDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	16, 99
Marine pollutant name	Copper(II) carbonate hydroxide, Frits, chemicals.
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(II) carbonate hydroxide, Frits, chemicals), 9, III

MEX

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Copper(II) carbonate hydroxide, Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(II) carbonate hydroxide, Frits, chemicals), 9, III
Special Provisions	274, 331, 335

ICAO (air)

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(II) carbonate hydroxide, Frits, chemicals), 9, III
Special Provisions	A97, A158, A197, A215

IATA

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III

Technical Name	Frits, chemicals, Copper(II) carbonate hydroxide
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Copper(II) carbonate hydroxide), 9, III
Special Provisions	A97, A158, A197
ERG Code	9L

IMDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	P
Marine Pollutant	Copper(II) carbonate hydroxide, Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(II) carbonate hydroxide, Frits, chemicals), 9, III, Marine pollutant

RID

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(II) carbonate hydroxide, Frits, chemicals), 9, III

ADR

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(II) carbonate hydroxide, Frits, chemicals), 9, III, (-)

ADN

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(II) carbonate hydroxide, Frits, chemicals), 9, III
Equipment Requirements	PP

15. Regulatory information**International Inventories**

TSCA Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Frits, chemicals	65997-18-4	Present	Active
Quartz	14808-60-7	Present	Active
Feldspar	68476-25-5	Present	Active

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Spodumene (AlLi(SiO ₃) ₂)	1302-37-0	Present	Active
Limestone	1317-65-3	Present	Active
Kaolin	1332-58-7	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
Tin oxide (SnO ₂)	18282-10-5	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
Polyphosphoric acids, sodium salts	68915-31-1	Present	Active
C.I. Pigment Blue 28	1345-16-0	Present	Active
Hydroxylapatite (Ca ₅ (OH)(PO ₄) ₃)	1306-06-5	Present	Active
Iron oxide (Fe ₂ O ₃)	1309-37-1	Present	Active
Copper(II) carbonate hydroxide	12069-69-1	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Mica	12001-26-2	-	Unknown *
Titanium dioxide	13463-67-7	Present	Active
Silica, cristobalite	14464-46-1	Present	Active
Ethanolamine	141-43-5	Present	Active

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Frits, chemicals - 65997-18-4	0.1
	1.0
C.I. Pigment Blue 28 - 1345-16-0	0.1
Copper(II) carbonate hydroxide - 12069-69-1	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and

40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Frits, chemicals 65997-18-4	-	X	-	-
Copper(II) carbonate hydroxide 12069-69-1	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Frits, chemicals 65997-18-4	X	-	X
Quartz 14808-60-7	X	X	X
Feldspar 68476-25-5	X	-	X
Limestone 1317-65-3	X	X	X
Kaolin 1332-58-7	X	X	X
Tin oxide (SnO ₂) 18282-10-5	X	X	-
C.I. Pigment Blue 28 1345-16-0	X	-	X
Iron oxide (Fe ₂ O ₃) 1309-37-1	X	X	X
Copper(II) carbonate hydroxide 12069-69-1	X	-	X
Mica 12001-26-2	X	-	X
Titanium dioxide 13463-67-7	X	X	X
Silica, cristobalite 14464-46-1	X	X	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information
NFPA
HMIS

Chronic Hazard Star Legend

 Health hazards 2
 Health hazards 2 *

* = Chronic Health Hazard

 Flammability 0
 Flammability 0

 Instability 0
 Physical hazards 0

 Special hazards -
 Personal protection X

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: Exposure controls/personal protection**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGl(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 11-Apr-2024

Revision Note**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 23-Mar-2023

Revision Number 1

1. Identification

Product identifier

Product Name PCF-3 Midnight Run

Other means of identification

Product Code(s) FG00830

UN number or ID number UN3082

Synonyms 35540D

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard statements**Danger**

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H350 - May cause cancer

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/clothing and eye/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Contaminated work clothing must not be allowed out of the workplace

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

28.687 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Other information

Toxic to aquatic life with long lasting effects. Toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Frits, chemicals	65997-18-4	10 - 20
Quartz	14808-60-7	5 - <10
Limestone	1317-65-3	3 - <5
Titanium dioxide	13463-67-7	3 - <5
Zinc oxide (ZnO)	1314-13-2	1 - <3
Spinel, chromium cobalt iron black	68186-97-0	1 - <3

1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1
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4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage**Precautions for safe handling**

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection**Control parameters**

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium tetrachloride Zr TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust

		: (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	
Limestone 1317-65-3	-	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³ TWA: 2.4 mg/m ³ CIB 63 fine TWA: 0.3 mg/m ³ CIB 63 ultrafine, including engineered nanoscale
Zinc oxide (ZnO) 1314-13-2	STEL: 10 mg/m ³ respirable particulate matter TWA: 2 mg/m ³ respirable particulate matter	TWA: 5 mg/m ³ fume TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 5 mg/m ³ fume (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction (vacated) STEL: 10 mg/m ³ fume	IDLH: 500 mg/m ³ Ceiling: 15 mg/m ³ dust TWA: 5 mg/m ³ dust and fume STEL: 10 mg/m ³ fume
Spinel, chromium cobalt iron black 68186-97-0	TWA: 0.02 mg/m ³ Co inhalable particulate matter	TWA: 0.5 mg/m ³ Cr (vacated) TWA: 0.5 mg/m ³ Cr	IDLH: 25 mg/m ³ Cr(III) TWA: 0.5 mg/m ³ Cr

Biological occupational exposure limits

Chemical name	ACGIH
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical
Spinel, chromium cobalt iron black 68186-97-0	15 µg/L - urine (Cobalt) - end of shift at end of workweek

Appropriate engineering controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid
 Appearance
 Color
 Odor
 Odor threshold

Property	Values	Remarks • Method
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Other information		
Explosive properties	No information available	
Oxidizing properties	No information available	
VOC Content (%)	No information available	

10. Stability and reactivity

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Conditions to avoid None known based on information supplied.

Incompatible materials None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact

May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).

Ingestion

Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics**Symptoms**

Itching. Rashes. Hives.

Acute toxicity**Numerical measures of toxicity**

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	479.80 mg/kg
ATEmix (dermal)	8,364.70 mg/kg
ATEmix (inhalation-dust/mist)	6.62 mg/l

Unknown acute toxicity

28.687 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	= 5.09 mg/L (Rat) 4 h
Zinc oxide (ZnO) 1314-13-2	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 5700 mg/m ³ (Rat) 4 h
Spinel, chromium cobalt iron black 68186-97-0	-	-	> 5.09 mg/L (Rat) 4 h
1,3,5-Triazine-1,3,5-(2H,4H,6H)-t riethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation**

No information available.

Serious eye damage/eye irritation

No information available.

Respiratory or skin sensitization

May cause an allergic skin reaction.

Germ cell mutagenicity

No information available.

Carcinogenicity

Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X
Quartz 14808-60-7	A2	Group 1	Known	X
Titanium dioxide 13463-67-7	-	Group 2B	-	X

Spinels, chromium cobalt iron black 68186-97-0	A3	Group 2B Group 3	Reasonably Anticipated	X
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Legend**ACGIH (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.**STOT - single exposure** No information available.**STOT - repeated exposure** May cause damage to organs through prolonged or repeated exposure.**Target organ effects** Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate.**Aspiration hazard** No information available.**Other adverse effects****Interactive effects****12. Ecological information****Ecotoxicity** Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Zinc oxide (ZnO) 1314-13-2	-	LC50: =1.55mg/L (96h, Danio rerio)	-	-
1,3,5-Triazine-1,3,5(2H,4 H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability**Bioaccumulation** There is no data for this product.**Other adverse effects** No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products	Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.
Contaminated packaging	Do not reuse empty containers.
California Hazardous Waste Status	This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

UN number or ID number	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant	PP
Marine pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
Emergency Response Guide Number	171

TDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	16, 99
Marine pollutant name	Frits, chemicals, Zinc oxide (ZnO).
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III

MEX

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals, Zinc oxide (ZnO)
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III
Special Provisions	274, 331, 335

ICAO (air)

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III
Special Provisions	A97, A158, A197, A215

IATA

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9

Packing group	III
Technical Name	Frits, chemicals, Zinc oxide (ZnO)
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III
Special Provisions	A97, A158, A197
ERG Code	9L

IMDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	P
Marine Pollutant	Frits, chemicals, Zinc oxide (ZnO)
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III, Marine pollutant

RID

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III

ADR

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III, (-)

ADN

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III
Equipment Requirements	PP

15. Regulatory information**International Inventories****TSCA**

Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Frits, chemicals	65997-18-4	Present	Active
Petalite	1302-66-5	-	Unknown *

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Quartz	14808-60-7	Present	Active
Limestone	1317-65-3	Present	Active
Nepheline syenite	37244-96-5	-	Unknown *
Titanium dioxide	13463-67-7	Present	Active
Zinc oxide (ZnO)	1314-13-2	Present	Active
Spinels, chromium cobalt iron black	68186-97-0	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
Polyphosphoric acids, sodium salts	68915-31-1	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Ethanolamine	141-43-5	Present	Active

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Frits, chemicals - 65997-18-4	0.1 1.0
Zinc oxide (ZnO) - 1314-13-2	1.0
Spinels, chromium cobalt iron black - 68186-97-0	0.1 1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
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Frits, chemicals 65997-18-4	-	X	-	-
Zinc oxide (ZnO) 1314-13-2	-	X	-	-
Spinel, chromium cobalt iron black 68186-97-0	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Frits, chemicals 65997-18-4	X	-	X
Quartz 14808-60-7	X	X	X
Limestone 1317-65-3	X	X	X
Titanium dioxide 13463-67-7	X	X	X
Zinc oxide (ZnO) 1314-13-2	X	X	X
Spinel, chromium cobalt iron black 68186-97-0	X	-	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 2	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 2 *	Flammability 0	Physical hazards 0	Personal protection X
<i>Chronic Hazard Star Legend * = Chronic Health Hazard</i>				

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: Exposure controls/personal protection**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGl(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 23-Mar-2023

Revision Note

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 23-Mar-2023

Revision Number 1

1. Identification

Product identifier

Product Name PCF-18 Honeydew

Other means of identification

Product Code(s) FG00828

UN number or ID number UN3082

Synonyms 35538B

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard statements**Warning**

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H351 - Suspected of causing cancer

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/clothing and eye/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Contaminated work clothing must not be allowed out of the workplace

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

27.787 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Other information

Toxic to aquatic life with long lasting effects. Toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Frits, chemicals	65997-18-4	10 - 20
Quartz	14808-60-7	5 - <10
Limestone	1317-65-3	3 - <5
Titanium dioxide	13463-67-7	3 - <5
Zinc oxide (ZnO)	1314-13-2	1 - <3
Copper(II) carbonate hydroxide	12069-69-1	0.1 - 1

1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1
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4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage**Precautions for safe handling**

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection**Control parameters**

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium tetrachloride Zr TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust

		: (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	
Limestone 1317-65-3	-	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³ TWA: 2.4 mg/m ³ CIB 63 fine TWA: 0.3 mg/m ³ CIB 63 ultrafine, including engineered nanoscale
Zinc oxide (ZnO) 1314-13-2	STEL: 10 mg/m ³ respirable particulate matter TWA: 2 mg/m ³ respirable particulate matter	TWA: 5 mg/m ³ fume TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 5 mg/m ³ fume (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction (vacated) STEL: 10 mg/m ³ fume	IDLH: 500 mg/m ³ Ceiling: 15 mg/m ³ dust TWA: 5 mg/m ³ dust and fume STEL: 10 mg/m ³ fume
Copper(II) carbonate hydroxide 12069-69-1	TWA: 1 mg/m ³ Cu dust and mist	-	IDLH: 100 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Cu dust and mist

Biological occupational exposure limits

Chemical name	ACGIH
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical

Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid
 Appearance
 Color
 Odor
 Odor threshold

Property	Values	Remarks • Method
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Other information		
Explosive properties	No information available	
Oxidizing properties	No information available	
VOC Content (%)	No information available	

10. Stability and reactivity

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Conditions to avoid None known based on information supplied.

Incompatible materials None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact

May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).

Ingestion

Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics**Symptoms**

Itching. Rashes. Hives.

Acute toxicity**Numerical measures of toxicity**

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	476.20 mg/kg
ATEmix (dermal)	8,290.70 mg/kg
ATEmix (inhalation-dust/mist)	6.57 mg/l

Unknown acute toxicity

27.787 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	= 5.09 mg/L (Rat) 4 h
Zinc oxide (ZnO) 1314-13-2	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 5700 mg/m ³ (Rat) 4 h
Copper(II) carbonate hydroxide 12069-69-1	= 1350 mg/kg (Rat) = 1495 mg/kg (Rat)	> 2000 mg/kg (Rat)	= 1.2 mg/L (Rat) 4 h
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation**

No information available.

Serious eye damage/eye irritation

No information available.

Respiratory or skin sensitization

May cause an allergic skin reaction.

Germ cell mutagenicity

No information available.

Carcinogenicity

Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X
Quartz 14808-60-7	A2	Group 1	Known	X
Titanium dioxide 13463-67-7	-	Group 2B	-	X

Legend**ACGIH (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.**STOT - single exposure** No information available.**STOT - repeated exposure** May cause damage to organs through prolonged or repeated exposure.**Target organ effects** Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate.**Aspiration hazard** No information available.**Other adverse effects****Interactive effects****12. Ecological information****Ecotoxicity** Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Zinc oxide (ZnO) 1314-13-2	-	LC50: =1.55mg/L (96h, Danio rerio)	-	-
1,3,5-Triazine-1,3,5(2H,4 H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability**Bioaccumulation** There is no data for this product.**Other adverse effects** No information available.**13. Disposal considerations**

Disposal methods

Waste from residues/unused products	Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.
Contaminated packaging	Do not reuse empty containers.
California Hazardous Waste Status	This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information**DOT**

UN number or ID number	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant	PP
Marine pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
Emergency Response Guide Number	171

TDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	16, 99
Marine pollutant name	Copper(II) carbonate hydroxide, Frits, chemicals.
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(II) carbonate hydroxide, Frits, chemicals), 9, III

MEX

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Copper(II) carbonate hydroxide, Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(II) carbonate hydroxide, Frits, chemicals), 9, III
Special Provisions	274, 331, 335

ICAO (air)

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(II) carbonate hydroxide, Frits, chemicals), 9, III
Special Provisions	A97, A158, A197, A215

IATA

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals, Copper(II) carbonate hydroxide
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Copper(II) carbonate hydroxide), 9, III
Special Provisions	A97, A158, A197

ERG Code	9L
IMDG	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	P
Marine Pollutant	Copper(II) carbonate hydroxide, Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(II) carbonate hydroxide, Frits, chemicals), 9, III, Marine pollutant
RID	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(II) carbonate hydroxide, Frits, chemicals), 9, III
ADR	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(II) carbonate hydroxide, Frits, chemicals), 9, III, (-)
ADN	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(II) carbonate hydroxide, Frits, chemicals), 9, III
Equipment Requirements	PP

15. Regulatory information

International Inventories

TSCA Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Frits, chemicals	65997-18-4	Present	Active
Petalite	1302-66-5	-	Unknown *
Quartz	14808-60-7	Present	Active
Limestone	1317-65-3	Present	Active
Nepheline syenite	37244-96-5	-	Unknown *
Titanium dioxide	13463-67-7	Present	Active
Zinc oxide (ZnO)	1314-13-2	Present	Active

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Smectite-group minerals	12199-37-0	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
Copper(II) carbonate hydroxide	12069-69-1	Present	Active
Polyphosphoric acids, sodium salts	68915-31-1	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Ethanolamine	141-43-5	Present	Active

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Frits, chemicals - 65997-18-4	0.1
	1.0
Zinc oxide (ZnO) - 1314-13-2	1.0
Copper(II) carbonate hydroxide - 12069-69-1	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Frits, chemicals 65997-18-4	-	X	-	-
Zinc oxide (ZnO) 1314-13-2	-	X	-	-
Copper(II) carbonate hydroxide	-	X	-	-

12069-69-1				
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CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Frits, chemicals 65997-18-4	X	-	X
Quartz 14808-60-7	X	X	X
Limestone 1317-65-3	X	X	X
Titanium dioxide 13463-67-7	X	X	X
Zinc oxide (ZnO) 1314-13-2	X	X	X
Copper(II) carbonate hydroxide 12069-69-1	X	-	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 2	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 2 *	Flammability 0	Physical hazards 0	Personal protection X
<i>Chronic Hazard Star Legend</i> * = Chronic Health Hazard				

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: Exposure controls/personal protection**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGl(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 23-Mar-2023

Revision Note

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 23-Mar-2023

Revision Number 1

1. Identification

Product identifier

Product Name PCF-19 Cirrus Flow

Other means of identification

Product Code(s) FG00829

UN number or ID number UN3082

Synonyms 35539C

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard statements**Warning**

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H351 - Suspected of causing cancer

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/clothing and eye/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Contaminated work clothing must not be allowed out of the workplace

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

28.937 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Other information

Toxic to aquatic life with long lasting effects. Toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Frits, chemicals	65997-18-4	10 - 20
Quartz	14808-60-7	5 - <10
Limestone	1317-65-3	3 - <5
Titanium dioxide	13463-67-7	3 - <5
C.I. Pigment Blue 71	68186-95-8	1 - <3
Zinc oxide (ZnO)	1314-13-2	1 - <3

1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1
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4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage**Precautions for safe handling**

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection**Control parameters**

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium tetrachloride Zr TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust

		: (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	
Limestone 1317-65-3	-	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³ TWA: 2.4 mg/m ³ CIB 63 fine TWA: 0.3 mg/m ³ CIB 63 ultrafine, including engineered nanoscale
C.I. Pigment Blue 71 68186-95-8	STEL: 10 mg/m ³ Zr TWA: 5 mg/m ³ Zr	TWA: 5 mg/m ³ Zr (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr	IDLH: 25 mg/m ³ Zr Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 5 mg/m ³ except Zirconium tetrachloride Zr STEL: 10 mg/m ³ Zr
Zinc oxide (ZnO) 1314-13-2	STEL: 10 mg/m ³ respirable particulate matter TWA: 2 mg/m ³ respirable particulate matter	TWA: 5 mg/m ³ fume TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 5 mg/m ³ fume (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction (vacated) STEL: 10 mg/m ³ fume	IDLH: 500 mg/m ³ Ceiling: 15 mg/m ³ dust TWA: 5 mg/m ³ dust and fume STEL: 10 mg/m ³ fume

Biological occupational exposure limits

Chemical name	ACGIH
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical

Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid

Appearance

Color

Odor

Odor threshold

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties No information available

Oxidizing properties No information available

VOC Content (%) No information available

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact

May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).

Ingestion

Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics**Symptoms**

Itching. Rashes. Hives.

Acute toxicity**Numerical measures of toxicity**

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	484.70 mg/kg
ATEmix (dermal)	8,444.00 mg/kg
ATEmix (inhalation-dust/mist)	6.68 mg/l

Unknown acute toxicity

28.937 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	= 5.09 mg/L (Rat) 4 h
C.I. Pigment Blue 71 68186-95-8	-	-	> 5.1 mg/L (Rat) 4 h
Zinc oxide (ZnO) 1314-13-2	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 5700 mg/m ³ (Rat) 4 h
1,3,5-Triazine-1,3,5-(2H,4H,6H)-triethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation**

No information available.

Serious eye damage/eye irritation

No information available.

Respiratory or skin sensitization

May cause an allergic skin reaction.

Germ cell mutagenicity

No information available.

Carcinogenicity

Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X
Quartz 14808-60-7	A2	Group 1	Known	X
Titanium dioxide 13463-67-7	-	Group 2B	-	X

Legend**ACGIH (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Target organ effects	Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate.
Aspiration hazard	No information available.
Other adverse effects	
Interactive effects	

12. Ecological information

Ecotoxicity Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Zinc oxide (ZnO) 1314-13-2	-	LC50: =1.55mg/L (96h, Danio rerio)	-	-
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products	Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.
Contaminated packaging	Do not reuse empty containers.
California Hazardous Waste Status	This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information**DOT**

UN number or ID number	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant	PP
Marine pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
Emergency Response Guide Number	171

TDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	16, 99
Marine pollutant name	Frits, chemicals, Zinc oxide (ZnO).
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III

MEX

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals, Zinc oxide (ZnO)
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III
Special Provisions	274, 331, 335

ICAO (air)

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III
Special Provisions	A97, A158, A197, A215

IATA

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals, Zinc oxide (ZnO)
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III
Special Provisions	A97, A158, A197

ERG Code	9L
IMDG	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	P
Marine Pollutant	Frits, chemicals, Zinc oxide (ZnO)
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III, Marine pollutant
RID	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III
ADR	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III, (-)
ADN	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III
Equipment Requirements	PP

15. Regulatory information

International Inventories

TSCA Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Frits, chemicals	65997-18-4	Present	Active
Petalite	1302-66-5	-	Unknown *
Quartz	14808-60-7	Present	Active
Limestone	1317-65-3	Present	Active
Nepheline syenite	37244-96-5	-	Unknown *
Titanium dioxide	13463-67-7	Present	Active
C.I. Pigment Blue 71	68186-95-8	Present	Active

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Zinc oxide (ZnO)	1314-13-2	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
Polyphosphoric acids, sodium salts	68915-31-1	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Ethanolamine	141-43-5	Present	Active

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Frits, chemicals - 65997-18-4	0.1
	1.0
C.I. Pigment Blue 71 - 68186-95-8	1.0
Zinc oxide (ZnO) - 1314-13-2	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Frits, chemicals 65997-18-4	-	X	-	-
Zinc oxide (ZnO) 1314-13-2	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Frits, chemicals 65997-18-4	X	-	X
Quartz 14808-60-7	X	X	X
Limestone 1317-65-3	X	X	X
Titanium dioxide 13463-67-7	X	X	X
C.I. Pigment Blue 71 68186-95-8	X	-	-
Zinc oxide (ZnO) 1314-13-2	X	X	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA Health hazards 2 Flammability 0 Instability 0 Special hazards -
HMIS Health hazards 2 * Flammability 0 Physical hazards 0 Personal protection X
Chronic Hazard Star Legend * = Chronic Health Hazard

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: Exposure controls/personal protection

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)
 Ceiling Maximum limit value * Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 23-Mar-2023

Revision Note

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 23-Mar-2023

Revision Number 1

1. Identification

Product identifier

Product Name PCF-54 Flux Blossom

Other means of identification

Product Code(s) FG00831

UN number or ID number UN3082

Synonyms 35541E

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 1A
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard statements**Danger**

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H350 - May cause cancer

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/clothing and eye/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Contaminated work clothing must not be allowed out of the workplace

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

28.387 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Other information

Toxic to aquatic life with long lasting effects. Toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Frits, chemicals	65997-18-4	10 - 20
Quartz	14808-60-7	5 - <10
Limestone	1317-65-3	3 - <5
Titanium dioxide	13463-67-7	3 - <5
Zircon	14940-68-2	1 - <3
Zinc oxide (ZnO)	1314-13-2	1 - <3

Silicic acid, zirconium salt, cadmium pigment-encapsulated	102184-95-2	0.1 - 1
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage**Precautions for safe handling**

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection**Control parameters**

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium tetrachloride Zr TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
Quartz	TWA: 0.025 mg/m ³ respirable	TWA: 50 µg/m ³	IDLH: 50 mg/m ³ respirable dust

14808-60-7	particulate matter	(vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	TWA: 0.05 mg/m ³ respirable dust
Limestone 1317-65-3	-	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³ TWA: 2.4 mg/m ³ CIB 63 fine TWA: 0.3 mg/m ³ CIB 63 ultrafine, including engineered nanoscale
Zircon 14940-68-2	STEL: 10 mg/m ³ Zr TWA: 5 mg/m ³ Zr	TWA: 5 mg/m ³ Zr (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr	IDLH: 25 mg/m ³ Zr TWA: 5 mg/m ³ except Zirconium tetrachloride Zr STEL: 10 mg/m ³ Zr
Zinc oxide (ZnO) 1314-13-2	STEL: 10 mg/m ³ respirable particulate matter TWA: 2 mg/m ³ respirable particulate matter	TWA: 5 mg/m ³ fume TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 5 mg/m ³ fume (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction (vacated) STEL: 10 mg/m ³ fume	IDLH: 500 mg/m ³ Ceiling: 15 mg/m ³ dust TWA: 5 mg/m ³ dust and fume STEL: 10 mg/m ³ fume
Silicic acid, zirconium salt, cadmium pigment-encapsulated 102184-95-2	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 5 mg/m ³ Zr	TWA: 5 mg/m ³ Zr (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr	IDLH: 9 mg/m ³ Cd dust and fume IDLH: 25 mg/m ³ Zr TWA: 5 mg/m ³ except Zirconium tetrachloride Zr STEL: 10 mg/m ³ Zr

Biological occupational exposure limits

Chemical name	ACGIH
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical
Silicic acid, zirconium salt, cadmium pigment-encapsulated 102184-95-2	5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical

Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.

Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid

Appearance

Color

Odor

Odor threshold

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties No information available

Oxidizing properties No information available

VOC Content (%) No information available

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure**Product Information**

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives.

Acute toxicity**Numerical measures of toxicity**

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	485.10 mg/kg
ATEmix (dermal)	8,459.80 mg/kg
ATEmix (inhalation-dust/mist)	6.69 mg/l

Unknown acute toxicity

28.387 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	= 5.09 mg/L (Rat) 4 h
Zinc oxide (ZnO) 1314-13-2	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 5700 mg/m ³ (Rat) 4 h
Silicic acid, zirconium salt, cadmium pigment-encapsulated 102184-95-2	-	-	> 5.07 mg/L (Rat) 4 h
1,3,5-Triazine-1,3,5(2H,4H,6H)-t riethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X
Quartz 14808-60-7	A2	Group 1	Known	X
Titanium dioxide 13463-67-7	-	Group 2B	-	X
Silicic acid, zirconium salt, cadmium pigment-encapsulated 102184-95-2	A2	Group 1	Known	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Target organ effects Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate.

Aspiration hazard No information available.

Other adverse effects

Interactive effects

12. Ecological information

Ecotoxicity Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Zinc oxide (ZnO) 1314-13-2	-	LC50: =1.55mg/L (96h, Danio rerio)	-	-
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations**Disposal methods**

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging Do not reuse empty containers.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information**DOT**

UN number or ID number UN3082
Proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Special Provisions 8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant PP
Marine pollutant Frits, chemicals, Silicic acid, zirconium salt, cadmium pigment-encapsulated
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Silicic acid, zirconium salt, cadmium pigment-encapsulated), 9, III, Marine pollutant
Emergency Response Guide Number 171

TDG

UN number or ID number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Special Provisions 16, 99
Marine pollutant name Frits, chemicals, Zinc oxide (ZnO).
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III

MEX

UN number or ID number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Technical Name Frits, chemicals, Zinc oxide (ZnO)
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III
Special Provisions 274, 331, 335

ICAO (air)

UN number or ID number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9

Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III
Special Provisions	A97, A158, A197, A215

IATA

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals, Zinc oxide (ZnO)
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III
Special Provisions	A97, A158, A197
ERG Code	9L

IMDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	P
Marine Pollutant	Frits, chemicals, Zinc oxide (ZnO)
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III, Marine pollutant

RID

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III

ADR

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III, (-)

ADN

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III
Equipment Requirements	PP

15. Regulatory information**International Inventories**

TSCA

Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Frits, chemicals	65997-18-4	Present	Active
Petalite	1302-66-5	-	Unknown *
Quartz	14808-60-7	Present	Active
Limestone	1317-65-3	Present	Active
Nepheline syenite	37244-96-5	-	Unknown *
Titanium dioxide	13463-67-7	Present	Active
Zircon	14940-68-2	Present	Active
Zinc oxide (ZnO)	1314-13-2	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
Silicic acid, zirconium salt, cadmium pigment-encapsulated	102184-95-2	-	Unknown *
Polyphosphoric acids, sodium salts	68915-31-1	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Ethanolamine	141-43-5	Present	Active

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL

Contact supplier for inventory compliance status.

EINECS/ELINCS

Contact supplier for inventory compliance status.

ENCS

Contact supplier for inventory compliance status.

IECSC

Contact supplier for inventory compliance status.

KECL

Contact supplier for inventory compliance status.

PICCS

Contact supplier for inventory compliance status.

AIIC

Contact supplier for inventory compliance status.

NZIoC

Contact supplier for inventory compliance status.

Legend:**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AIIC** - Australian Inventory of Industrial Chemicals**NZIoC** - New Zealand Inventory of Chemicals**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Frits, chemicals - 65997-18-4	0.1
	1.0
Zinc oxide (ZnO) - 1314-13-2	1.0
Silicic acid, zirconium salt, cadmium pigment-encapsulated - 102184-95-2	0.1

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate

classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Frits, chemicals 65997-18-4	-	X	-	-
Zinc oxide (ZnO) 1314-13-2	-	X	-	-
Silicic acid, zirconium salt, cadmium pigment-encapsulated 102184-95-2	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Frits, chemicals 65997-18-4	X	-	X
Quartz 14808-60-7	X	X	X
Limestone 1317-65-3	X	X	X
Titanium dioxide 13463-67-7	X	X	X
Zinc oxide (ZnO) 1314-13-2	X	X	X
Silicic acid, zirconium salt, cadmium pigment-encapsulated 102184-95-2	X	-	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information**NFPA**

Health hazards 2

Flammability 0

Instability 0

Special hazards -

HMIS

Health hazards 2 *

Flammability 0

Physical hazards 0

Personal protection X

Chronic Hazard Star Legend

* = Chronic Health Hazard

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: Exposure controls/personal protection

TWA Ceiling	TWA (time-weighted average) Maximum limit value	STEL *	STEL (Short Term Exposure Limit) Skin designation
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Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGl(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 23-Mar-2023

Revision Note**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 23-Mar-2023

Revision Number 1

1. Identification

Product identifier

Product Name PCF-74 River Birch

Other means of identification

Product Code(s) FG00832

UN number or ID number UN3082

Synonyms 35542F

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard statements**Warning**

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H351 - Suspected of causing cancer

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/clothing and eye/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Contaminated work clothing must not be allowed out of the workplace

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

29.507 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Other information

Toxic to aquatic life with long lasting effects. Toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Frits, chemicals	65997-18-4	10 - 20
Quartz	14808-60-7	5 - <10
Limestone	1317-65-3	3 - <5
Titanium dioxide	13463-67-7	3 - <5
Zinc oxide (ZnO)	1314-13-2	1 - <3
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium tetrachloride Zr TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust

		TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	
Limestone 1317-65-3	-	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³ TWA: 2.4 mg/m ³ CIB 63 fine TWA: 0.3 mg/m ³ CIB 63 ultrafine, including engineered nanoscale
Zinc oxide (ZnO) 1314-13-2	STEL: 10 mg/m ³ respirable particulate matter TWA: 2 mg/m ³ respirable particulate matter	TWA: 5 mg/m ³ fume TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 5 mg/m ³ fume (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction (vacated) STEL: 10 mg/m ³ fume	IDLH: 500 mg/m ³ Ceiling: 15 mg/m ³ dust TWA: 5 mg/m ³ dust and fume STEL: 10 mg/m ³ fume

Biological occupational exposure limits

Chemical name	ACGIH
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical

Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Physical state	Liquid
Appearance	

Color
Odor
Odor threshold

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
<u>Other information</u>		
Explosive properties	No information available	
Oxidizing properties	No information available	
VOC Content (%)	No information available	

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives.

Acute toxicity**Numerical measures of toxicity**

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 471.10 mg/kg
 ATEmix (dermal) 8,199.50 mg/kg
 ATEmix (inhalation-dust/mist) 6.49 mg/l

Unknown acute toxicity

29.507 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	= 5.09 mg/L (Rat) 4 h
Zinc oxide (ZnO) 1314-13-2	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 5700 mg/m ³ (Rat) 4 h
1,3,5-Triazine-1,3,5-(2H,4H,6H)-triethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X
Quartz 14808-60-7	A2	Group 1	Known	X
Titanium dioxide 13463-67-7	-	Group 2B	-	X

Legend**ACGIH (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen
 A2 - Suspected Human Carcinogen
 A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans
 Group 2A - Probably Carcinogenic to Humans
 Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Target organ effects	Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate.
Aspiration hazard	No information available.
Other adverse effects	
Interactive effects	

12. Ecological information

Ecotoxicity	Toxic to aquatic life. Toxic to aquatic life with long lasting effects.
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Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Zinc oxide (ZnO) 1314-13-2	-	LC50: =1.55mg/L (96h, Danio rerio)	-	-
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability

Bioaccumulation	There is no data for this product.
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Other adverse effects	No information available.
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13. Disposal considerations

Disposal methods

Waste from residues/unused products	Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.
Contaminated packaging	Do not reuse empty containers.
California Hazardous Waste Status	This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

UN number or ID number	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant	PP
Marine pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
Emergency Response Guide Number	171

TDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	16, 99
Marine pollutant name	Frits, chemicals, Zinc oxide (ZnO).
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III

MEX

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals, Zinc oxide (ZnO)
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III
Special Provisions	274, 331, 335

ICAO (air)

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III
Special Provisions	A97, A158, A197, A215

IATA

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals, Zinc oxide (ZnO)
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III
Special Provisions	A97, A158, A197
ERG Code	9L

IMDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969

Marine pollutant	P
Marine Pollutant	Frits, chemicals, Zinc oxide (ZnO)
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III, Marine pollutant

RID

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III

ADR

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III, (-)

ADN

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Zinc oxide (ZnO)), 9, III
Equipment Requirements	PP

15. Regulatory information

International Inventories**TSCA**

Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Frits, chemicals	65997-18-4	Present	Active
Petalite	1302-66-5	-	Unknown *
Quartz	14808-60-7	Present	Active
Limestone	1317-65-3	Present	Active
Nepheline syenite	37244-96-5	-	Unknown *
Titanium dioxide	13463-67-7	Present	Active
Zinc oxide (ZnO)	1314-13-2	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
Polyphosphoric acids, sodium salts	68915-31-1	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-trietha nol	4719-04-4	Present	Active
Ethanolamine	141-43-5	Present	Active

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the

confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Frits, chemicals - 65997-18-4	0.1 1.0
Zinc oxide (ZnO) - 1314-13-2	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Frits, chemicals 65997-18-4	-	X	-	-
Zinc oxide (ZnO) 1314-13-2	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water	-	-	X

7732-18-5			
Frits, chemicals 65997-18-4	X	-	X
Quartz 14808-60-7	X	X	X
Limestone 1317-65-3	X	X	X
Titanium dioxide 13463-67-7	X	X	X
Zinc oxide (ZnO) 1314-13-2	X	X	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA Health hazards 2 Flammability 0 Instability 0 Special hazards -
HMIS Health hazards 2 * Flammability 0 Physical hazards 0 Personal protection X
*Chronic Hazard Star Legend * = Chronic Health Hazard*

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: Exposure controls/personal protection**

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)
 Ceiling Maximum limit value * Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGl(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

Revision date 23-Mar-2023

Revision Note**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 23-Mar-2023

Revision Number 1

1. Identification

Product identifier

Product Name PCF-75 Moss Mist

Other means of identification

Product Code(s) FG00833

UN number or ID number UN3082

Synonyms 35543G

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard statements**Warning**

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H351 - Suspected of causing cancer

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/clothing and eye/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Contaminated work clothing must not be allowed out of the workplace

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

28.337 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Other information

Toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Frits, chemicals	65997-18-4	10 - 20
Quartz	14808-60-7	5 - <10
Limestone	1317-65-3	3 - <5
Titanium dioxide	13463-67-7	3 - <5
Zinc oxide (ZnO)	1314-13-2	1 - <3
Zircon	14940-68-2	1 - <3

Copper(I) oxide	1317-39-1	0.1 - 1
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage**Precautions for safe handling**

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection**Control parameters**

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium tetrachloride Zr TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable

		respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	dust
Limestone 1317-65-3	-	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³ TWA: 2.4 mg/m ³ CIB 63 fine TWA: 0.3 mg/m ³ CIB 63 ultrafine, including engineered nanoscale
Zinc oxide (ZnO) 1314-13-2	STEL: 10 mg/m ³ respirable particulate matter TWA: 2 mg/m ³ respirable particulate matter	TWA: 5 mg/m ³ fume TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 5 mg/m ³ fume (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction (vacated) STEL: 10 mg/m ³ fume	IDLH: 500 mg/m ³ Ceiling: 15 mg/m ³ dust TWA: 5 mg/m ³ dust and fume STEL: 10 mg/m ³ fume
Zircon 14940-68-2	STEL: 10 mg/m ³ Zr TWA: 5 mg/m ³ Zr	TWA: 5 mg/m ³ Zr (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr	IDLH: 25 mg/m ³ Zr TWA: 5 mg/m ³ except Zirconium tetrachloride Zr STEL: 10 mg/m ³ Zr
Copper(I) oxide 1317-39-1	TWA: 1 mg/m ³ Cu dust and mist	-	IDLH: 100 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Cu dust and mist

Biological occupational exposure limits

Chemical name	ACGIH
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical

Appropriate engineering controls**Engineering controls**

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear safety glasses with side shields (or goggles).

Hand protection

Wear suitable gloves.

Skin and body protection

Wear suitable protective clothing.

Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid

Appearance

Color

Odor

Odor threshold

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties No information available

Oxidizing properties No information available

VOC Content (%) No information available

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives.

Acute toxicity

Numerical measures of toxicity

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	479.00 mg/kg
ATEmix (dermal)	8,356.30 mg/kg
ATEmix (inhalation-dust/mist)	6.61 mg/l

Unknown acute toxicity

28.337 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	= 5.09 mg/L (Rat) 4 h
Zinc oxide (ZnO) 1314-13-2	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 5700 mg/m ³ (Rat) 4 h
Copper(I) oxide 1317-39-1	= 470 mg/kg (Rat)	> 2000 mg/kg (Rat)	= 2.92 mg/L (Rat) 4 h = 3.69 mg/L (Rat) 4 h
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X
Quartz	A2	Group 1	Known	X

14808-60-7				
Titanium dioxide 13463-67-7	-	Group 2B	-	X

Legend**ACGIH (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.**STOT - single exposure** No information available.**STOT - repeated exposure** May cause damage to organs through prolonged or repeated exposure.**Target organ effects** Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate.**Aspiration hazard** No information available.**Other adverse effects****Interactive effects****12. Ecological information****Ecotoxicity** Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Zinc oxide (ZnO) 1314-13-2	-	LC50: =1.55mg/L (96h, Danio rerio)	-	-
Copper(I) oxide 1317-39-1	EC50: =65mg/L (96h, Desmodesmus subspicatus) EC50: 0.021 - 0.037mg/L (96h, Pseudokirchneriella subcapitata) EC50: 0.055 - 0.076mg/L (96h, Pseudokirchneriella subcapitata)	-	-	EC50: =0.51mg/L (48h, Daphnia magna)
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging Do not reuse empty containers.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

UN number or ID number	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant	PP
Marine pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
Emergency Response Guide Number	171

TDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	16, 99
Marine pollutant name	Copper(I) oxide, Frits, chemicals.
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(I) oxide, Frits, chemicals), 9, III

MEX

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Copper(I) oxide, Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(I) oxide, Frits, chemicals), 9, III
Special Provisions	274, 331, 335

ICAO (air)

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III

Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(I) oxide, Frits, chemicals), 9, III
Special Provisions	A97, A158, A197, A215
<u>IATA</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Copper(I) oxide, Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(I) oxide, Frits, chemicals), 9, III
Special Provisions	A97, A158, A197
ERG Code	9L
<u>IMDG</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	P
Marine Pollutant	Copper(I) oxide, Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(I) oxide, Frits, chemicals), 9, III, Marine pollutant
<u>RID</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(I) oxide, Frits, chemicals), 9, III
<u>ADR</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(I) oxide, Frits, chemicals), 9, III, (-)
<u>ADN</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(I) oxide, Frits, chemicals), 9, III
Equipment Requirements	PP

15. Regulatory information

International Inventories

TSCA Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Frits, chemicals	65997-18-4	Present	Active
Petalite	1302-66-5	-	Unknown *
Quartz	14808-60-7	Present	Active
Limestone	1317-65-3	Present	Active
Nepheline syenite	37244-96-5	-	Unknown *
Titanium dioxide	13463-67-7	Present	Active
Zinc oxide (ZnO)	1314-13-2	Present	Active
Zircon	14940-68-2	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
Polyphosphoric acids, sodium salts	68915-31-1	Present	Active
Copper(I) oxide	1317-39-1	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Ethanolamine	141-43-5	Present	Active

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Frits, chemicals - 65997-18-4	0.1 1.0
Zinc oxide (ZnO) - 1314-13-2	1.0
Copper(I) oxide - 1317-39-1	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Frits, chemicals 65997-18-4	-	X	-	-
Zinc oxide (ZnO) 1314-13-2	-	X	-	-
Copper(I) oxide 1317-39-1	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Frits, chemicals 65997-18-4	X	-	X
Quartz 14808-60-7	X	X	X
Limestone 1317-65-3	X	X	X
Titanium dioxide 13463-67-7	X	X	X
Zinc oxide (ZnO) 1314-13-2	X	X	X
Copper(I) oxide 1317-39-1	X	-	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 2	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 2 *	Flammability 0	Physical hazards 0	Personal protection X
<i>Chronic Hazard Star Legend * = Chronic Health Hazard</i>				

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: Exposure controls/personal protection**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)

EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGl(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 23-Mar-2023

Revision Note

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 12-Apr-2024

Revision Number 1

1. Identification

Product identifier

Product Name PG-24 Night Rain

Other means of identification

Product Code(s) FG00865

UN number or ID number UN3082

Synonyms 35549N

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements**Hazard statements****Danger**

H301 - Toxic if swallowed

H317 - May cause an allergic skin reaction

H332 - Harmful if inhaled

H350 - May cause cancer

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/clothing and eye/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area

Contaminated work clothing must not be allowed out of the workplace

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

Specific treatment (see .? on this label)

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF INHALED: Remove person to fresh air and keep comfortable for breathing

IF SWALLOWED: Immediately call a doctor

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

15.097 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

17.097 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Other information

Toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Frits, chemicals	65997-18-4	20 - 40

Quartz	14808-60-7	10 - 20
Calcium fluoride (CaF ₂)	7789-75-5	1 - <3
C.I. Pigment Blue 28	1345-16-0	1 - <3
Titanium dioxide	13463-67-7	0.1 - 1
Copper(II) carbonate hydroxide	12069-69-1	0.1 - 1
C.I. Pigment Green 26	68187-49-5	0.1 - 1
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing vapors or mists. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives. Coughing and/ or wheezing. Difficulty in breathing.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid breathing vapors or mists.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage**Precautions for safe handling**

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid breathing vapors or mists.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection**Control parameters**

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn

			TWA: 5 mg/m ³ except Zirconium tetrachloride Zr TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust
Calcium fluoride (CaF ₂) 7789-75-5	TWA: 2.5 mg/m ³ F	TWA: 2.5 mg/m ³ F (vacated) TWA: 2.5 mg/m ³	IDLH: 250 mg/m ³ F TWA: 2.5 mg/m ³ F
C.I. Pigment Blue 28 1345-16-0	TWA: 0.02 mg/m ³ Co inhalable particulate matter TWA: 1 mg/m ³ respirable particulate matter	-	-
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³ TWA: 2.4 mg/m ³ CIB 63 fine TWA: 0.3 mg/m ³ CIB 63 ultrafine, including engineered nanoscale
Copper(II) carbonate hydroxide 12069-69-1	TWA: 1 mg/m ³ Cu dust and mist	-	IDLH: 100 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Cu dust and mist
C.I. Pigment Green 26 68187-49-5	TWA: 0.02 mg/m ³ Co inhalable particulate matter	TWA: 0.5 mg/m ³ Cr (vacated) TWA: 0.5 mg/m ³ Cr	IDLH: 25 mg/m ³ Cr(III) TWA: 0.5 mg/m ³ Cr

Biological occupational exposure limits

Chemical name	ACGIH
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical
Calcium fluoride (CaF ₂) 7789-75-5	2 mg/L - urine (Fluoride) - prior to shift 3 mg/L - urine (Fluoride) - end of shift
C.I. Pigment Blue 28 1345-16-0	15 µg/L - urine (Cobalt) - end of shift at end of workweek
C.I. Pigment Green 26 68187-49-5	15 µg/L - urine (Cobalt) - end of shift at end of workweek

Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid
 Appearance
 Color
 Odor
 Odor threshold

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
<u>Other information</u>		
Explosive properties	No information available	
Oxidizing properties	No information available	
VOC Content (%)	No information available	

10. Stability and reactivity

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Conditions to avoid Excessive heat.

Incompatible materials None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. Harmful by inhalation. (based on components).
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Toxic if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives. Coughing and/ or wheezing.

Acute toxicity

Numerical measures of toxicity

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	293.80 mg/kg
ATEmix (dermal)	5,747.20 mg/kg
ATEmix (inhalation-dust/mist)	4.31 mg/l

Unknown acute toxicity

15.097 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

17.097 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Calcium fluoride (CaF ₂) 7789-75-5	= 4250 mg/kg (Rat)	-	> 5070 mg/m ³ (Rat) 4 h
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	= 5.09 mg/L (Rat) 4 h
Copper(II) carbonate hydroxide 12069-69-1	= 1350 mg/kg (Rat) = 1495 mg/kg (Rat)	> 2000 mg/kg (Rat)	= 1.2 mg/L (Rat) 4 h
1,3,5-Triazine-1,3,5(2H,4H,6H)-t riethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
---------------	-------	------	-----	------

Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X
Quartz 14808-60-7	A2	Group 1	Known	X
Calcium fluoride (CaF ₂) 7789-75-5	-	Group 3	-	-
C.I. Pigment Blue 28 1345-16-0	A3	Group 2B	Reasonably Anticipated	X
Titanium dioxide 13463-67-7	-	Group 2B	-	X
C.I. Pigment Green 26 68187-49-5	A3	Group 2B Group 3	Reasonably Anticipated	X

Legend**ACGIH (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity

No information available.

STOT - single exposure

No information available.

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Target organ effects

Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate.

Aspiration hazard

No information available.

Other adverse effects**Interactive effects****12. Ecological information****Ecotoxicity**

Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging Do not reuse empty containers.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

UN number or ID number UN3082
Proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Special Provisions 8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant PP
Marine pollutant Frits, chemicals
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
Emergency Response Guide Number 171

TDG

UN number or ID number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Special Provisions 16, 99
Marine pollutant name Copper(II) carbonate hydroxide, Frits, chemicals.
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(II) carbonate hydroxide, Frits, chemicals), 9, III

MEX

UN number or ID number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
Technical Name Copper(II) carbonate hydroxide, Frits, chemicals
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(II) carbonate hydroxide, Frits, chemicals), 9, III
Special Provisions 274, 331, 335

ICAO (air)

UN number or ID number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III

Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(II) carbonate hydroxide, Frits, chemicals), 9, III
Special Provisions	A97, A158, A197, A215
<u>IATA</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals, Copper(II) carbonate hydroxide
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals, Copper(II) carbonate hydroxide), 9, III
Special Provisions	A97, A158, A197
ERG Code	9L
<u>IMDG</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	P
Marine Pollutant	Copper(II) carbonate hydroxide, Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(II) carbonate hydroxide, Frits, chemicals), 9, III, Marine pollutant
<u>RID</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(II) carbonate hydroxide, Frits, chemicals), 9, III
<u>ADR</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(II) carbonate hydroxide, Frits, chemicals), 9, III, (-)
<u>ADN</u>	
UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Copper(II) carbonate hydroxide, Frits, chemicals), 9, III
Equipment Requirements	PP

15. Regulatory information

International Inventories

TSCA Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Frits, chemicals	65997-18-4	Present	Active
Quartz	14808-60-7	Present	Active
Calcium fluoride (CaF ₂)	7789-75-5	Present	Active
C.I. Pigment Blue 28	1345-16-0	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
Kaolin	1332-58-7	Present	Active
Titanium dioxide	13463-67-7	Present	Active
Copper(II) carbonate hydroxide	12069-69-1	Present	Active
C.I. Pigment Green 26	68187-49-5	Present	Active
Polyphosphoric acids, sodium salts	68915-31-1	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Mica	12001-26-2	-	Unknown *
Silica, cristobalite	14464-46-1	Present	Active
Ethanolamine	141-43-5	Present	Active

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Frits, chemicals - 65997-18-4	0.1 1.0
C.I. Pigment Blue 28 - 1345-16-0	0.1
Copper(II) carbonate hydroxide - 12069-69-1	1.0
C.I. Pigment Green 26 - 68187-49-5	0.1 1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Frits, chemicals 65997-18-4	-	X	-	-
Copper(II) carbonate hydroxide 12069-69-1	-	X	-	-
C.I. Pigment Green 26 68187-49-5	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Frits, chemicals 65997-18-4	X	-	X
Quartz 14808-60-7	X	X	X
Calcium fluoride (CaF ₂) 7789-75-5	X	-	-
C.I. Pigment Blue 28 1345-16-0	X	-	X
Kaolin 1332-58-7	X	X	X
Titanium dioxide 13463-67-7	X	X	X
Copper(II) carbonate hydroxide 12069-69-1	X	-	X
C.I. Pigment Green 26 68187-49-5	X	-	X
Mica 12001-26-2	X	-	X
Silica, cristobalite 14464-46-1	X	X	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 2	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 2 *	Flammability 0	Physical hazards 0	Personal protection X
<i>Chronic Hazard Star Legend</i>		<i>* = Chronic Health Hazard</i>		

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: Exposure controls/personal protection**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 12-Apr-2024

Revision Note**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 12-Apr-2024

Revision Number 1

1. Identification

Product identifier

Product Name PG-42 Teal Drift

Other means of identification

Product Code(s) FG00866

UN number or ID number UN3082

Synonyms 35546K

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements**Hazard statements****Danger**

H301 - Toxic if swallowed

H317 - May cause an allergic skin reaction

H332 - Harmful if inhaled

H350 - May cause cancer

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/clothing and eye/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area

Contaminated work clothing must not be allowed out of the workplace

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

Specific treatment (see .? on this label)

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF INHALED: Remove person to fresh air and keep comfortable for breathing

IF SWALLOWED: Immediately call a doctor

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

14.955 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

16.955 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Other information

Toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Frits, chemicals	65997-18-4	20 - 40

Quartz	14808-60-7	10 - 20
Calcium fluoride (CaF ₂)	7789-75-5	1 - <3
C.I. Pigment Green 26	68187-49-5	1 - <3
Titanium dioxide	13463-67-7	0.1 - 1
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing vapors or mists. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms Itching. Rashes. Hives. Coughing and/ or wheezing. Difficulty in breathing.

Indication of any immediate medical attention and special treatment needed

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid breathing vapors or mists.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid breathing vapors or mists.
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Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.
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8. Exposure controls/personal protection

Control parameters

Exposure Limits	The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.
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Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium tetrachloride Zr

			TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust
Calcium fluoride (CaF ₂) 7789-75-5	TWA: 2.5 mg/m ³ F	TWA: 2.5 mg/m ³ F (vacated) TWA: 2.5 mg/m ³	IDLH: 250 mg/m ³ F TWA: 2.5 mg/m ³ F
C.I. Pigment Green 26 68187-49-5	TWA: 0.02 mg/m ³ Co inhalable particulate matter	TWA: 0.5 mg/m ³ Cr (vacated) TWA: 0.5 mg/m ³ Cr	IDLH: 25 mg/m ³ Cr(III) TWA: 0.5 mg/m ³ Cr
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³ TWA: 2.4 mg/m ³ CIB 63 fine TWA: 0.3 mg/m ³ CIB 63 ultrafine, including engineered nanoscale

Biological occupational exposure limits

Chemical name	ACGIH
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical
Calcium fluoride (CaF ₂) 7789-75-5	2 mg/L - urine (Fluoride) - prior to shift 3 mg/L - urine (Fluoride) - end of shift
C.I. Pigment Green 26 68187-49-5	15 µg/L - urine (Cobalt) - end of shift at end of workweek

Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Physical state	Liquid
Appearance	
Color	

Odor
Odor threshold

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
<u>Other information</u>		
Explosive properties	No information available	
Oxidizing properties	No information available	
VOC Content (%)	No information available	

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Excessive heat.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. Harmful by inhalation. (based on components).
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Toxic if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives. Coughing and/ or wheezing.

Acute toxicity**Numerical measures of toxicity**

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	284.00 mg/kg
ATEmix (dermal)	5,554.80 mg/kg
ATEmix (inhalation-dust/mist)	4.17 mg/l

Unknown acute toxicity

14.955 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

16.955 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Calcium fluoride (CaF ₂) 7789-75-5	= 4250 mg/kg (Rat)	-	> 5070 mg/m ³ (Rat) 4 h
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	= 5.09 mg/L (Rat) 4 h
1,3,5-Triazine-1,3,5-(2H,4H,6H)-t riethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X
Quartz 14808-60-7	A2	Group 1	Known	X
Calcium fluoride (CaF ₂) 7789-75-5	-	Group 3	-	-
C.I. Pigment Green 26 68187-49-5	A3	Group 2B Group 3	Reasonably Anticipated	X
Titanium dioxide 13463-67-7	-	Group 2B	-	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Target organ effects Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate.

Aspiration hazard No information available.

Other adverse effects

Interactive effects

12. Ecological information

Ecotoxicity Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging	Do not reuse empty containers.
California Hazardous Waste Status	This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

UN number or ID number	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant	PP
Marine pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
Emergency Response Guide Number	171

TDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	16, 99
Marine pollutant name	Frits, chemicals.
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

MEX

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	274, 331, 335

ICAO (air)

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197, A215

IATA

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197
ERG Code	9L

IMDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969

Marine pollutant	P
Marine Pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant

RID

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

ADR

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, (-)

ADN

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Equipment Requirements	PP

15. Regulatory information

International Inventories**TSCA**

Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Frits, chemicals	65997-18-4	Present	Active
Quartz	14808-60-7	Present	Active
Calcium fluoride (CaF ₂)	7789-75-5	Present	Active
C.I. Pigment Green 26	68187-49-5	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
Kaolin	1332-58-7	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
Titanium dioxide	13463-67-7	Present	Active
Polyphosphoric acids, sodium salts	68915-31-1	Present	Active
1,3,5-Triazine-1,3,5-(2H,4H,6H)-trietha nol	4719-04-4	Present	Active
Mica	12001-26-2	-	Unknown *
Silica, cristobalite	14464-46-1	Present	Active
Ethanolamine	141-43-5	Present	Active

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.

Legend:**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AIIC** - Australian Inventory of Industrial Chemicals**NZIoC** - New Zealand Inventory of Chemicals**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Frits, chemicals - 65997-18-4	0.1 1.0
C.I. Pigment Green 26 - 68187-49-5	0.1 1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Frits, chemicals 65997-18-4	-	X	-	-
C.I. Pigment Green 26 68187-49-5	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X

Frits, chemicals 65997-18-4	X	-	X
Quartz 14808-60-7	X	X	X
Calcium fluoride (CaF ₂) 7789-75-5	X	-	-
C.I. Pigment Green 26 68187-49-5	X	-	X
Kaolin 1332-58-7	X	X	X
Titanium dioxide 13463-67-7	X	X	X
Mica 12001-26-2	X	-	X
Silica, cristobalite 14464-46-1	X	X	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA Health hazards 2 Flammability 0 Instability 0 Special hazards -
HMIS Health hazards 2 * Flammability 0 Physical hazards 0 Personal protection X
 Chronic Hazard Star Legend * = Chronic Health Hazard

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: Exposure controls/personal protection**

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)
 Ceiling Maximum limit value * Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AELG(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

Revision date 12-Apr-2024

Revision Note

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the

date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 12-Apr-2024

Revision Number 1

1. Identification

Product identifier

Product Name PG-54 Lunar Pink

Other means of identification

Product Code(s) FG00867

UN number or ID number UN3082

Synonyms 35547L

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements**Hazard statements****Danger**

H301 - Toxic if swallowed

H317 - May cause an allergic skin reaction

H332 - Harmful if inhaled

H351 - Suspected of causing cancer

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/clothing and eye/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area

Contaminated work clothing must not be allowed out of the workplace

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

Specific treatment (see .? on this label)

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF INHALED: Remove person to fresh air and keep comfortable for breathing

IF SWALLOWED: Immediately call a doctor

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

16.255 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

18.255 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Other information

Toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Frits, chemicals	65997-18-4	20 - 40

Quartz	14808-60-7	10 - 20
C.I. Pigment Red 233	68187-12-2	3 - <5
Calcium fluoride (CaF ₂)	7789-75-5	1 - <3
Titanium dioxide	13463-67-7	0.1 - 1
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing vapors or mists. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives. Coughing and/ or wheezing. Difficulty in breathing.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid breathing vapors or mists.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid breathing vapors or mists.
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Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.
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8. Exposure controls/personal protection

Control parameters

Exposure Limits	The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.
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Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium tetrachloride Zr

			TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust
C.I. Pigment Red 233 68187-12-2	-	TWA: 0.5 mg/m ³ Cr (vacated) TWA: 0.5 mg/m ³ Cr	IDLH: 25 mg/m ³ Cr(III) TWA: 0.5 mg/m ³ Cr
Calcium fluoride (CaF ₂) 7789-75-5	TWA: 2.5 mg/m ³ F	TWA: 2.5 mg/m ³ F (vacated) TWA: 2.5 mg/m ³	IDLH: 250 mg/m ³ F TWA: 2.5 mg/m ³ F
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³ TWA: 2.4 mg/m ³ CIB 63 fine TWA: 0.3 mg/m ³ CIB 63 ultrafine, including engineered nanoscale

Biological occupational exposure limits

Chemical name	ACGIH
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical
Calcium fluoride (CaF ₂) 7789-75-5	2 mg/L - urine (Fluoride) - prior to shift 3 mg/L - urine (Fluoride) - end of shift

Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Physical state	Liquid
Appearance	
Color	
Odor	
Odor threshold	

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
<u>Other information</u>		
Explosive properties	No information available	
Oxidizing properties	No information available	
VOC Content (%)	No information available	

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Excessive heat.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. Harmful by inhalation. (based on components).
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Toxic if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives. Coughing and/ or wheezing.

Acute toxicity

Numerical measures of toxicity

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 292.30 mg/kg
 ATEmix (dermal) 5,716.40 mg/kg
 ATEmix (inhalation-dust/mist) 4.29 mg/l

Unknown acute toxicity

16.255 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
 18.255 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
C.I. Pigment Red 233 68187-12-2	-	-	> 5.4 mg/L (Rat) 4 h
Calcium fluoride (CaF ₂) 7789-75-5	= 4250 mg/kg (Rat)	-	> 5070 mg/m ³ (Rat) 4 h
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	= 5.09 mg/L (Rat) 4 h
1,3,5-Triazine-1,3,5(2H,4H,6H)-t riethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X
Quartz 14808-60-7	A2	Group 1	Known	X
C.I. Pigment Red 233 68187-12-2	-	Group 3	-	-
Calcium fluoride (CaF ₂) 7789-75-5	-	Group 3	-	-
Titanium dioxide 13463-67-7	-	Group 2B	-	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Target organ effects Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate.

Aspiration hazard No information available.

Other adverse effects

Interactive effects

12. Ecological information

Ecotoxicity Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging	Do not reuse empty containers.
California Hazardous Waste Status	This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

UN number or ID number	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant	PP
Marine pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
Emergency Response Guide Number	171

TDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	16, 99
Marine pollutant name	Frits, chemicals.
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

MEX

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	274, 331, 335

ICAO (air)

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197, A215

IATA

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197
ERG Code	9L

IMDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969

Marine pollutant	P
Marine Pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant

RID

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

ADR

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, (-)

ADN

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Equipment Requirements	PP

15. Regulatory information

International Inventories**TSCA**

Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Frits, chemicals	65997-18-4	Present	Active
Quartz	14808-60-7	Present	Active
C.I. Pigment Red 233	68187-12-2	Present	Active
Calcium fluoride (CaF ₂)	7789-75-5	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
Kaolin	1332-58-7	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
Titanium dioxide	13463-67-7	Present	Active
Polyphosphoric acids, sodium salts	68915-31-1	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Mica	12001-26-2	-	Unknown *
Silica, cristobalite	14464-46-1	Present	Active
Ethanolamine	141-43-5	Present	Active

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Frits, chemicals - 65997-18-4	0.1 1.0
C.I. Pigment Red 233 - 68187-12-2	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Frits, chemicals 65997-18-4	-	X	-	-
C.I. Pigment Red 233 68187-12-2	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Frits, chemicals	X	-	X

65997-18-4			
Quartz 14808-60-7	X	X	X
C.I. Pigment Red 233 68187-12-2	X	-	X
Calcium fluoride (CaF ₂) 7789-75-5	X	-	-
Kaolin 1332-58-7	X	X	X
Titanium dioxide 13463-67-7	X	X	X
Mica 12001-26-2	X	-	X
Silica, cristobalite 14464-46-1	X	X	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA Health hazards 2 Flammability 0 Instability 0 Special hazards -
HMIS Health hazards 2 * Flammability 0 Physical hazards 0 Personal protection X
Chronic Hazard Star Legend * = Chronic Health Hazard

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: Exposure controls/personal protection**

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)
 Ceiling Maximum limit value * Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGl(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

Revision date 12-Apr-2024

Revision Note**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage,

transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET



Revision date 12-Apr-2024

Revision Number 1

1. Identification

Product identifier

Product Name PG-55 Floating Lavendar

Other means of identification

Product Code(s) FG00868

UN number or ID number UN3082

Synonyms 35548M

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Manufacturer Address

American Art Clay Co Inc
6060 Guion Road
Indianapolis, IN 46254-1222 USA
Toll Free: 1-800-999-5456
CustomerCare@Amaco.com

Emergency telephone number

Emergency Telephone U.S. Poison Control 1-800-222-1222

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements**Hazard statements****Danger**

H301 - Toxic if swallowed

H317 - May cause an allergic skin reaction

H332 - Harmful if inhaled

H350 - May cause cancer

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/clothing and eye/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area

Contaminated work clothing must not be allowed out of the workplace

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

Specific treatment (see .? on this label)

IF ON SKIN: Wash with plenty of water and soap

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF INHALED: Remove person to fresh air and keep comfortable for breathing

IF SWALLOWED: Immediately call a doctor

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

16.005 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

18.005 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Other information

Toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Frits, chemicals	65997-18-4	20 - 40

Quartz	14808-60-7	10 - 20
C.I. Pigment Red 233	68187-12-2	1 - <3
Calcium fluoride (CaF ₂)	7789-75-5	1 - <3
Titanium dioxide	13463-67-7	0.1 - 1
C.I. Pigment Blue 28	1345-16-0	0.1 - 1
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing vapors or mists. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives. Coughing and/ or wheezing. Difficulty in breathing.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid breathing vapors or mists.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage**Precautions for safe handling**

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid breathing vapors or mists.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection**Control parameters**

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Frits, chemicals 65997-18-4	STEL: 10 mg/m ³ Zr TWA: 0.01 mg/m ³ As TWA: 0.05 mg/m ³ Pb TWA: 0.01 mg/m ³ Cd TWA: 0.002 mg/m ³ Cd respirable particulate matter TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 3 mg/m ³ W respirable particulate matter in the absence of cobalt TWA: 5 mg/m ³ Zr TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	TWA: 10 µg/m ³ As TWA: 50 µg/m ³ Pb TWA: 0.5 mg/m ³ Sb TWA: 5 mg/m ³ Zr (vacated) TWA: 0.5 mg/m ³ Sb (vacated) TWA: 5 mg/m ³ Zr (vacated) STEL: 10 mg/m ³ Zr (vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 5 mg/m ³ As IDLH: 9 mg/m ³ Cd dust and fume IDLH: 50 mg/m ³ Sb IDLH: 100 mg/m ³ Cu dust and mist IDLH: 500 mg/m ³ Mn IDLH: 25 mg/m ³ Zr IDLH: 100 mg/m ³ Pb IDLH: 10 mg/m ³ Ni Ceiling: 0.002 mg/m ³ As 15 min Ceiling: 0.05 mg/m ³ V dust and fume 15 min TWA: 0.5 mg/m ³ Sb TWA: 1 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Mn TWA: 5 mg/m ³ except Zirconium

			tetrachloride Zr TWA: 0.050 mg/m ³ Pb TWA: 0.015 mg/m ³ except Nickel carbonyl Ni STEL: 3 mg/m ³ Mn STEL: 10 mg/m ³ Zr
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust
C.I. Pigment Red 233 68187-12-2	-	TWA: 0.5 mg/m ³ Cr (vacated) TWA: 0.5 mg/m ³ Cr	IDLH: 25 mg/m ³ Cr(III) TWA: 0.5 mg/m ³ Cr
Calcium fluoride (CaF ₂) 7789-75-5	TWA: 2.5 mg/m ³ F	TWA: 2.5 mg/m ³ F (vacated) TWA: 2.5 mg/m ³	IDLH: 250 mg/m ³ F TWA: 2.5 mg/m ³ F
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³ TWA: 2.4 mg/m ³ CIB 63 fine TWA: 0.3 mg/m ³ CIB 63 ultrafine, including engineered nanoscale
C.I. Pigment Blue 28 1345-16-0	TWA: 0.02 mg/m ³ Co inhalable particulate matter TWA: 1 mg/m ³ respirable particulate matter	-	-

Biological occupational exposure limits

Chemical name	ACGIH
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical
Calcium fluoride (CaF ₂) 7789-75-5	2 mg/L - urine (Fluoride) - prior to shift 3 mg/L - urine (Fluoride) - end of shift
C.I. Pigment Blue 28 1345-16-0	15 µg/L - urine (Cobalt) - end of shift at end of workweek

Appropriate engineering controls**Engineering controls**

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear safety glasses with side shields (or goggles).

Hand protection

Wear suitable gloves.

Skin and body protection

Wear suitable protective clothing.

Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations

Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid

Appearance

Color

Odor

Odor threshold

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties No information available

Oxidizing properties No information available

VOC Content (%) No information available

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Excessive heat.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information**Information on likely routes of exposure****Product Information**

Inhalation	Specific test data for the substance or mixture is not available. Harmful by inhalation. (based on components).
Eye contact	Specific test data for the substance or mixture is not available.

Skin contact

May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).

Ingestion

Specific test data for the substance or mixture is not available. Toxic if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics**Symptoms**

Itching. Rashes. Hives. Coughing and/ or wheezing.

Acute toxicity**Numerical measures of toxicity**

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	293.20 mg/kg
ATEmix (dermal)	5,733.90 mg/kg
ATEmix (inhalation-dust/mist)	4.30 mg/l

Unknown acute toxicity

16.005 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

18.005 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
C.I. Pigment Red 233 68187-12-2	-	-	> 5.4 mg/L (Rat) 4 h
Calcium fluoride (CaF ₂) 7789-75-5	= 4250 mg/kg (Rat)	-	> 5070 mg/m ³ (Rat) 4 h
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	= 5.09 mg/L (Rat) 4 h
1,3,5-Triazine-1,3,5-(2H,4H,6H)-triethanol 4719-04-4	= 763 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 0.4 mg/L (Rat) 4 h = 0.338 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation**

No information available.

Serious eye damage/eye irritation

No information available.

Respiratory or skin sensitization

May cause an allergic skin reaction.

Germ cell mutagenicity

No information available.

Carcinogenicity

Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X
Quartz 14808-60-7	A2	Group 1	Known	X
C.I. Pigment Red 233 68187-12-2	-	Group 3	-	-

Calcium fluoride (CaF ₂) 7789-75-5	-	Group 3	-	-
Titanium dioxide 13463-67-7	-	Group 2B	-	X
C.I. Pigment Blue 28 1345-16-0	A3	Group 2B	Reasonably Anticipated	X

Legend**ACGIH (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Target organ effects Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate.

Aspiration hazard No information available.

Other adverse effects

Interactive effects

12. Ecological information

Ecotoxicity Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations**Disposal methods**

Waste from residues/unused products	Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.
Contaminated packaging	Do not reuse empty containers.
California Hazardous Waste Status	This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information**DOT**

UN number or ID number	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	8, 146, 173, 335, IB3, T4, TP1, TP29
DOT Marine Pollutant	PP
Marine pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant
Emergency Response Guide Number	171

TDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Special Provisions	16, 99
Marine pollutant name	Frits, chemicals.
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

MEX

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	274, 331, 335

ICAO (air)

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197, A215

IATA

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Technical Name	Frits, chemicals

Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Special Provisions	A97, A158, A197
ERG Code	9L

IMDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969
Marine pollutant	P
Marine Pollutant	Frits, chemicals
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, Marine pollutant

RID

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

ADR

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Tunnel restriction code	(-)
Special Provisions	274, 335, 601, 375
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, (-)

ADN

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es)	9
Packing group	III
Classification code	M6
Special Provisions	274, 335, 375, 601
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III
Equipment Requirements	PP

15. Regulatory information

International Inventories**TSCA**

Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Frits, chemicals	65997-18-4	Present	Active
Quartz	14808-60-7	Present	Active
C.I. Pigment Red 233	68187-12-2	Present	Active
Calcium fluoride (CaF ₂)	7789-75-5	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
Kaolin	1332-58-7	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
Titanium dioxide	13463-67-7	Present	Active

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Polyphosphoric acids, sodium salts	68915-31-1	Present	Active
C.I. Pigment Blue 28	1345-16-0	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Mica	12001-26-2	-	Unknown *
Silica, cristobalite	14464-46-1	Present	Active
Ethanolamine	141-43-5	Present	Active

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Frits, chemicals - 65997-18-4	0.1
	1.0
C.I. Pigment Red 233 - 68187-12-2	1.0
C.I. Pigment Blue 28 - 1345-16-0	0.1

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Frits, chemicals 65997-18-4	-	X	-	-
C.I. Pigment Red 233 68187-12-2	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Frits, chemicals 65997-18-4	X	-	X
Quartz 14808-60-7	X	X	X
C.I. Pigment Red 233 68187-12-2	X	-	X
Calcium fluoride (CaF ₂) 7789-75-5	X	-	-
Kaolin 1332-58-7	X	X	X
Titanium dioxide 13463-67-7	X	X	X
C.I. Pigment Blue 28 1345-16-0	X	-	X
Mica 12001-26-2	X	-	X
Silica, cristobalite 14464-46-1	X	X	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 2	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 2 *	Flammability 0	Physical hazards 0	Personal protection X
<i>Chronic Hazard Star Legend * = Chronic Health Hazard</i>				

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)

National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

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Revision Note

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet