



# C34427 C34428 V# 051700 Safety Data Sheet

OSHA format **Revision Number** 0

Revision Date Sep-29-2016

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier	
Product name	Wide Range Indicator
Other means of identification	
Product Code(s)	2218
UN-No	1170
Recommended use of the c	hemical and restrictions on use
Recommended Use	Use as a laboratory reagent. Industrial (not for food or food contact use). Laboratory chemicals.
Details of the supplier of the	e safety data sheet
	Manufacturer Address
	LaMotte Company, Inc.
	802 Washington Avenue
	P.O. Box 329

Chestertown, MD 21620 USA T 410-778-3100 F 410-778-9748

Emergency telephone numbers (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

Page 1/10

### 2. HAZARDS IDENTIFICATION

Serious eye damage/eye irritation	Category 2A
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1A
Reproductive toxicity	Category 1A
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 1
Physical hazards Flammable Liquids.	Category 3

### EMERGENCY OVERVIEW

### DANGER

### Hazard statements

Causes serious eye irritation. May cause genetic defects. May cause cancer. May damage fertility or the unborn child. May cause respiratory irritation. May cause drowsiness or dizziness. Causes damage to organs through prolonged or repeated exposure. FLAMMABLE LIQUID AND VAPOR.



Appearance dark green

Physical state liquid

Odor Alcohol

### **Precautionary Statements - Prevention**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Wear eye/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area.

Response: IF exposed or concerned: Get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF SWALLOWED:. Drink 1 or 2 glasses of water. Call a physician immediately.

Storage: Store locked up. Keep container tightly closed and in a well-ventilated place.

**Disposal:** Dispose of contents/container to an approved waste disposal plant.

### **Other Hazards**

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

### **3. COMPOSITION/INFORMATION ON INGREDIENTS\***

Chemical name	CAS No.	Weight-%	
Phenolphthalein	77-09-8	<0.05	
Potassium hydroxide	1310-58-3	<0.1	
2,4-Dinitrophenol	51-28-5	0.05	
Methyl alcohol	67-56-1	2	
Ethyl alcohol	64-17-5	52	

Page 2/10

WARNING! This product contains chemcials known to the State of California to cause cancer and birth defects or other reproductive harm

Do not get in eyes, on skin, or on clothing. If symptoms persist, call a physician. Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.
Do not get in eyes, on skin, or on clothing. If symptoms persist, call a physician. Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.
Jonsult a physician.
Nash off immediately with plenty of water for at least 15 minutes. Consult a physician if necessary.
Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Drink 1 or 2 glasses of water. Do not induce vomiting without medical advice. Call a ohysician immediately.
Use personal protection recommended in Section 8. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. No artificial respiration, mouth-to-mouth or mouth to nose. Use suitable instruments/apparatus.

### 5. FIREFIGHTING MEASURES

Suitable extinguishing media Water spray, dry chemical, carbon dioxide (CO 2), or foam.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

	6. ACCIDENTAL RELEASE MEASURES				
Personal precautions, protectiv	e equipment and emergency procedures				
Personal precautions	See section 8. Ensure adequate ventilation. Remove all sources of ignition.				
Environmental precautions	See Section 12 for additional Ecological Information. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.				
Methods and material for contai	inment and cleaning up				
Methods for containment	Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Dispose according to federal, state, and local regulations.				
Methods for cleaning up	After cleaning, flush away traces with water.				
and the second second	7. HANDLING AND STORAGE				
Precautions for safe handling					
Handling	Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using this product.				

Conditions for safe storage, including any incompatibilities

Page 3/10

### 2218 \*- Wide Range Indicator

Issuing Date Dec-12-2016

Storage:

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Do not store near combustible materials. Keep out of the reach of children.

Incompatible Products

NITRIC ACID. Strong oxidizing agents.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Phenolphthalein 77-09-8	*-		Not Established
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m <sup>3</sup>	(vacated) Ceiling: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>
2,4-Dinitrophenol 51-28-5	•	*	Not Established
Methyl alcohol 67-56-1	STEL: 250 ppm TWA: 200 ppm S*	TWA: 200 ppm TWA: 260 mg/m <sup>3</sup> (vacated) TWA: 200 ppm (vacated) TWA: 260 mg/m <sup>3</sup> (vacated) STEL: 250 ppm (vacated) STEL: 325 mg/m <sup>3</sup> (vacated) S*	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m <sup>3</sup> STEL: 250 ppm STEL: 325 mg/m <sup>3</sup>
Ethyl alcohol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup> (vacated) TWA: 1000 ppm (vacated) TWA: 1000 ppm	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup>

Appropriate engineering controls

**Engineering Measures** 

Showers Eyewash stations Ventilation systems.

Individual protection measures, such as person	al protective equipment
--	-------------------------

Eye/Face Protection	Wear safety glasses with side shields (or goggles).	
Skin and body protection	Wear protective gloves/clothing. Nitrile rubber. Gloves & Lab Coat.	
Respiratory protection	Use only with adequate ventilation.	
Hygiene Measures	Do not eat, drink or smoke when using this product.	
Hygiene Measures	Do not eat, drink or smoke when using this product.	

### 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Physical state	liquid		
Appearance	dark green	Odor	Alcohol
Property	Values	Remarks • Meth	od
pH		Not Applicable	
Melting point / freezing point	No information available		
Boiling point / boiling range	ca 78.5 °C / 173.3 °F	(Calculated base	d on percent denatured alcohol)
Flash point	ca 23 °C / 70 °F	(Calculated base (based on .?)	d on percent denatured alcohol)
Evaporation rate			
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	19% Ethanol		
Lower flammability limit:	3.3% Ethanol		

Page 4/10

### 2218 \*- Wide Range Indicator

Vapor pressure Vapor density Specific gravity Water solubility Solubility in other solvents Partition coefficient Autoignition temperature Decomposition temperature Kinematic viscosity Dynamic viscosity Explosive properties Oxidizing properties

Other Information

Softening point Molecular weight VOC Content (%) Density Bulk density No information available No information available

No information available

No information available

No information available

48

1.6

# 10. STABILITY AND REACTIVITY

Stability Hazardous polymerization	Stable under normal conditions of use and storage. Hazardous polymerization does not occur.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	NITRIC ACID. Strong oxidizing agents.

Hazardous decomposition products Carbon oxides (COx).

### **11. TOXICOLOGICAL INFORMATION**

### Information on likely routes of exposure

### Component identification

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Phenolphthalein 77-09-8	Not Established	Not Established	Not Established
Potassium hydroxide 1310-58-3	= 284 mg/kg (Rat)	Not Established	Not Established
2,4-Dinitrophenol 51-28-5	= 30 mg/kg (Rat)	= 25 mg/kg (Rat)	Not Established
Methyl alcohol 67-56-1	= 6200 mg/kg (Rat)	= 15800 mg/kg (Rabbit)	= 64000 ppm (Rat) 4 h = 22500 ppm (Rat) 8 h
Ethyl alcohol 64-17-5	= 7060 mg/kg (Rat)	Not Established	= 124.7 mg/L (Rat) 4 h

### Information on toxicological effects

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

Chemical name	ACGIN	IARC	NIP	USHA
Phenolphthalein 77-09-8	Not Established	Group 2B	Reasonably Anticipated	x
Potassium hydroxide 1310-58-3	Not Established	Not Established	Not Established	Not Established
2,4-Dinitrophenol 51-28-5	Not Established	Not Established	Not Established	Not Established
Methyl alcohol 67-56-1	Not Established	Not Established	Not Established	Not Established
Ethyl alcohol 64-17-5	A3	Group 1	Known	x

Issuing Date Dec-12-2016 Group 2B - Possibly Carcinogenic to Humans

Known - Known Carcinogen Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

X - Present **Chronic toxicity** 

Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage. Prolonged skin contact may cause skin irritation and/or dermatitis.

ATEmix (oral)	5,000.00 mg/kg
ATEmix (dermal)	15,000.00 mg/kg
ATEmix (inhalation-dust/mist)	25.05 mg/l

### 12. ECOLOGICAL INFORMATION

### Ecotoxicity

.

Toxic to aquatic life with long lasting effects

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Phenolphthalein 77-09-8	Not Established	Not Established	Not Established
Potassium hydroxide 1310-58-3	Not Established	80: 96 h Gambusia affinis mg/L LC50 static	Not Established
2,4-Dinitrophenol 51-28-5	Not Established	13590 - 17460: 96 h Lepomis macrochirus µg/L LC50 static 210 - 330: 96 h Cyprinus carpio mg/L LC50 5.86 - 7.39: 96 h Pimephales promelas mg/L LC50 flow-through 910 - 1480: 96 h Oncorhynchus mykiss µg/L LC50 flow-through 390: 96 h Oncorhynchus mykiss µg/L LC50 static	Not Established
Methyl alcohol 67-56-1	Not Established	13500 - 17600: 96 h Lepomis macrochirus mg/L LC50 flow-through 18 - 20: 96 h Oncorhynchus mykiss mL/L LC50 static 19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 28200: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static	Not Established
Ethyl alcohol 64-17-5	Not Established	12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static	9268 - 14221: 48 h Daphnia magna mg/L LC50 10800: 24 h Daphnia magna mg/L EC50 2: 48 h Daphnia magna mg/L EC50 Static

Persistence and degradability Ethanol: When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material is expected to quickly evaporate. When released into water, this material may evaporate to a moderate extent. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to be readily removed from the atmosphere by dry and wet deposition. When released into the air, this material is expected to have a half-life between 1 and 10 days.

### **Bioaccumulation/Accumulation**

Ethanol:

When released into the soil, this material is expected to quickly evaporate.

When released into water, this material may evaporate to a moderate extent. This material is not expected to significantly bioaccumulate.

Page 6/10

When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to be readily removed from the atmosphere by dry and wet deposition. When released into the air, this material is expected to have a half-life between 1 and 10 days.

Chemical name	Log Pow
Phenolphthalein 77-09-8	Not Established
Potassium hydroxide 1310-58-3	0.65 0.83
2,4-Dinitrophenol 51-28-5	1.54
Methyl alcohol 67-56-1	-0.77
Ethyl alcohol 64-17-5	-0.32

### 13. DISPOSAL CONSIDERATIONS

### **Disposal Methods**

Dispose of waste product or used containers according to local regulations.

Contaminated packaging

Do not reuse empty containers.

Chemical name	RCRA	RCRA - Basis for Listing	<b>RCRA - D Serles Wastes</b>	RCRA - U Series Wastes
Phenolphthalein 77-09-8	Not Established	-	Not Established	Not Established
Potassium hydroxide 1310-58-3	Not Established	-	Not Established	Not Established
2,4-Dinitrophenol 51-28-5	P048	Included in waste streams: F039, K001	Not Established	Not Established
Methyl alcohol 67-56-1	Not Established	Included in waste stream: F039	Not Established	U154
Ethyl alcohol 64-17-5	Not Established	-	Not Established	Not Established

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Phenolphthalein 77-09-8	Not Established	Not Established	Not Established	Not Established
Potassium hydroxide 1310-58-3	Not Established	Not Established	Not Established	Not Established
2,4-Dinitrophenol 51-28-5	Not Established	P048	Not Established	Not Established
Methyl alcohol 67-56-1	Not Established	Not Established	Not Established	Not Established
Ethyl alcohol 64-17-5	Not Established	Not Established	Not Established	Not Established

.

Chemical name	California Hazardous Waste Status
Phenolphthalein 77-09-8	•
Potassium hydroxide	Toxic
1310-58-3	Corrosive
2,4-Dinitrophenol 51-28-5	*-
Methyl alcohol	Toxic
67-56-1	Ignitable
Ethyl alcohol	Toxic
64-17-5	Ignitable

### **14. TRANSPORT INFORMATION**

Page 7/10

### 2218 \*- Wide Range Indicator

DOT	
Proper shipping name	ETHANOL SOLUTION (Ethyl Alcohol Solution)
UN-No	1170
Hazard Class	3
Packing group	
TDG	Not regulated
MEX	Not regulated
ICAO	Not regulated
IATA	
UN-No	1170
Proper shipping name	ETHANOL / ETHYL ALCOHOL SOLUTION
Hazard Class	3
Packing group	11
IMDG/IMO	
UN-No	1170
Proper shipping name	ETHANOL / ETHYL ALCOHOL SOLUTION
Hazard Class	3
Packing group	
RID	
UN-No	1170
Proper shipping name	ETHANOL / ETHYL ALCOHOL SOLUTION
Hazard Class	3
Packing group	
ADR	
UN-No	1170
Proper shipping name	ETHANOL / ETHYL ALCOHOL SOLUTION
Hazard Class	3
Packing group	11
ADN	Not regulated

International Inventories TSCA Complies DSL/NDSL Complies EINECS/ELINCS Complies Complies Complies ENCS IECSC Complies KECL PICCS Complies AICS Complies

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 EINECS - 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 AICS - Australian Inventory of Chemical Substances

### **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

**15. REGULATORY INFORMATION** 

Page 8/10

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 %
Phenolphthalein 77-09-8	0.1
Potassium hydroxide 1310-58-3	Not Established
2,4-Dinitrophenol 51-28-5	1.0
Methyl alcohol 67-56-1	1.0
Ethyl alcohol 64-17-5	Not Established
SARA 311/312 Hazard Categories	
Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

<u>CWA (Clean Water Act)</u> 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
Phenolphthalein 77-09-8	Not Established	Not Established	Not Established	Not Established
Potassium hydroxide 1310-58-3	1000 lb	Not Established	Not Established	x
2,4-Dinitrophenol 51-28-5	10 lb	x	x	x
Methyl alcohol 67-56-1	Not Established	Not Established	Not Established	Not Established
Ethyl alcohol 64-17-5	Not Established	Not Established	Not Established	Not Established

CERCLA This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Phenolphthalein 77-09-8	*	Not Established	-
Potassium hydroxide 1310-58-3	1000 lb	Not Established	RQ 1000 lb final RQ RQ 454 kg final RQ
2,4-Dinitrophenol 51-28-5	10 lb	Not Established	RQ 10 lb final RQ RQ 4.54 kg final RQ
Methyl alcohol 67-56-1	5000 lb	Not Established	RQ 5000 lb final RQ RQ 2270 kg final RQ
Ethyl alcohol 64-17-5	*	Not Established	

### **US State Regulations**

California Proposition 65 WARNING! This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

(Ethyl alcohol is only considered a Proposition 65 cancer and developmental hazard when it is ingested as an alcoholic beverage).

Chemical name	California Proposition 65	
Phenolphthalein 77-09-8	Carcinogen	
Potassium hydroxide 1310-58-3	Not Established	
2,4-Dinitrophenol 51-28-5	Not Established	
Methyl alcohol	Developmental	

Page 9/10

67-56-1	
Ethyl alcohol 64-17-5	Carcinogen

U.S. State Right-to-Know Regulations

Component

Phenolphthalein 77-09-8 ( <0.05 ) Methyl alcohol

67-56-1 ( 2 ) Ethyl alcohol 64-17-5 ( 52 )

Chemical name	New Jersey	Massachusetts	Pennsylvania
Phenolphthalein 77-09-8	X	Not Established	Not Established
Potassium hydroxide 1310-58-3	X	X	X
2,4-Dinitrophenol 51-28-5	X	x	x
Methyl alcohol 67-56-1	X	X	X
Ethyl alcohol 64-17-5	X	X	x

### CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

	Chemical name		CPSC (	Consumer Product Safety Subst	Commission) - Specially Regulated ances
Potassium hydroxide 1310-58-3 Methyl alcohol 67-56-1			Banned, 16 CFR 1500.17 Add POISON to label, 16 CFR 1500.129		
				Special labeling,	16 CFR 1500.14
addan 205		16. OTHER INI	FORM	ATION	
NFPA Health hazard 2	Health hazard 2 Flammability 3	Flammability	3	Instability 0	Physical and Chemical Hazards N/A
2	>				
HEALTH FLAMMABILITY REACTIVITY	2				
Prepared by Issuing Date Revision Date	Regulate Dec-12- Sep-29-	ory Affairs Departm 2016 2016	ent		
Reason for revision Disclaimer The information provid	New US ded on this SDS is correct	GHS format	nowled	ge, information and belie	of at the date of its publication.

The information provided on this 3D3 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet

California Proposition 65 Carcinogen Developmental Carcinogen

Page 10/10



# Safety Data Sheet

OSHA format **Revision Number** 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier	
Product name	Nitrate #1 Tablets
Other means of Identificatio	n
Product Code(s)	2799A
Recommended use of the cl	hemical and restrictions on use
Recommended Use	Use as a laboratory reagent. Industrial (not for food or food contact use).
Details of the supplier of the	e safety data sheet
	Manufacturer Address
	LaMotte Company, Inc.
	802 Washington Avenue
	P.O. Box 329
	Chestertown, MD 21620 USA
	T 410-778-3100

Emergency telephone numbers (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

### 2. HAZARDS IDENTIFICATION

### **OSHA Regulatory Status**

This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

F 410-778-9748

### **EMERGENCY OVERVIEW**

Appearance White Tablet ~0.1g (100mg)

Physical state Solid

**Odor** Odorless

### **Precautionary Statements - Prevention**

Do not handle until all safety precautions have been read and understood. Keep container tightly closed. Keep out of reach of children.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF SWALLOWED:. Drink 1 or 2 glasses of water. Call a physician immediately.

### Storage:

Store in a well-ventilated place. Keep cool.

### **Other Hazards**

May be harmful if swallowed. Causes mild skin irritation. Harmful to aquatic life with long lasting effects.

Unknown Acute Toxicity 3.2% of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS\*

Page 1/7

Chemical name	CAS No.	Weight-%
Sulfamic acid	5329-14-6	1-10
Chloride salt	*_	40-50

4. FIRST AID MEASURES				
First Aid Measures				
General advice	Do not get in eyes, on skin, or on clothing.			
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.			
Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. Consult a physician if necessary.			
Inhalation	Remove to fresh air.			
Ingestion	Clean mouth with water and drink afterwards plenty of water. Consult a physician if necessary.			

**5. FIREFIGHTING MEASURES** 

<u>Suitable extinguishing media</u> Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

<u>Protective equipment and precautions for firefighters</u> As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

	6. ACCIDENTAL RELEASE MEASURES
Personal precautions, protective	e equipment and emergency procedures
Personal precautions	Use personal protection recommended in Section 8. Avoid contact with eyes, skin and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Environmental precautions	See Section 12 for additional Ecological Information. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Methods and material for contai	nment and cleaning up
Methods for containment	Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).
Methods for cleaning up	After cleaning, flush away traces with water.
	7. HANDLING AND STORAGE
Precautions for safe handling	
Handling	Handle in accordance with good industrial hygiene and safety practice.
Conditions for safe storage, inc	luding any incompatibilities
Storage:	Keep containers tightly closed in a dry, cool and well-ventilated place.

Page 2/7

**Incompatible Products** 

None known based on information supplied.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfamic acid	-	*-	Not Established
5329-14-6			Not Established
Chionde salt			NOT Established
Appropriate engineering controls	5		
Engineering Measures	Showers		
	Eyewash stations		
	Ventilation systems.		
Individual protection measures, s	such as personal protective equipm	nent	
Eye/Face Protection	Wear safety glasses with side shi	elds (or goggles).	
Skin and body protection	Protective gloves. Nitrile rubber.		
Hygiene Measures	Handle in accordance with good i	ndustrial hygiene and safety p	practice.
	9. PHYSICAL AND CHEMIC	AL PROPERTIES	
Information on basic physical an	d chemical properties		
Physical state	Solid		and a
Appearance	White Tablet ~0.1g (100mg)	Odor	Odorless
Color	White		
Property	Values	Remarks • Method	
pH	2.5		
Melting point / freezing point	No information available		
Boiling point / boiling range	No information available		
Flash point	Not Applicable		
Evaporation rate			
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Specific gravity	No information available		
Water solubility	Soluble in water		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		
Other Information			
Softening point	No information available		
Molecular weight	No information available		
	Page 3/7		

VOC Content (%) Density Bulk density	No information available No information available No information available	
No. State of the second	10. STABILITY AND REACTIVITY	
Stability Hazardous polymerization	Stable under recommended storage conditions. Hazardous polymerization does not occur.	
Conditions to avoid	Extremes of temperature and direct sunlight.	
Incompatible materials	None known based on information supplied.	

Hazardous decomposition products

### **11. TOXICOLOGICAL INFORMATION**

### Information on likely routes of exposure

### **Component identification**

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Sulfamic acid 5329-14-6	= 1450 mg/kg (Rat)	Not Established	Not Established
Chloride salt	= 2600 mg/kg (Rat)	Not Established	Not Established

### Information on toxicological effects

Chemical name	ACGIH	IARC	NTP	OSHA
Sulfamic acid 5329-14-6	Not Established	Not Established	Not Established	Not Established
Chloride salt	Not Established	Not Established	Not Established	Not Established

Group 3 - Not classifiable as to its carcinogenicity to humans

3,855.00 mg/kg

ATEmix (oral)

### **12. ECOLOGICAL INFORMATION**

Ecotoxicity Harmful to aquatic life with long lasting effects

Unknown Aquatic Toxicity 48.9 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Sulfamic acid 5329-14-6	Not Established	14.2: 96 h Pimephales promelas mg/L LC50 static	Not Established
Chloride salt	2500: 72 h Desmodesmus subspicatus mg/L EC50	750 - 1020: 96 h Pimephales promeias mg/L LC50 static 1060: 96 h Lepomis macrochirus mg/L LC50 static	825: 48 h Daphnia magna mg/L EC50 83: 48 h Daphnia magna mg/L EC50 Static

# Persistence and degradability No information available.

# Bioaccumulation/Accumulation No information available.

Chemical name	Log Pow	
Sulfamic acid 5329-14-6	Not Established	
Chloride salt	Not Established	

### 13. DISPOSAL CONSIDERATIONS

**Disposal Methods** 

Dispose of waste product or used containers according to local regulations.

Contaminated packaging

Do not reuse empty containers.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Sulfamic acid 5329-14-6	Not Established		Not Established	Not Established
Chloride salt	Not Established		Not Established	Not Established
Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Sulfamic acid 5329-14-6	Not Established	Not Established	Not Established	Not Established
Chloride salt	Not Established	Not Established	Not Established	Not Established
	Chemical name		California Hazardous Wa	aste Status
	Sulfamia acid			

Sulfamic acid 5329-14-6	
Chloride salt	

### **14. TRANSPORT INFORMATION**

DOT	Not regulated
TDG	Not regulated
MEX	Not regulated
ICAO	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
RID	Not regulated
ADR	Not regulated
ADN	Not regulated

### **15. REGULATORY INFORMATION**

Complies
Complies
Does not comply
Complies

Legend: TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

Page 5/7

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 AICS - Australian Inventory of Chemical Substances

### 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 %
Sulfamic acid	Not Established
5329-14-6	
Chloride salt	Not Established
ARA 311/312 Hazard Categories	
Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

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)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfamic acid 5329-14-6	Not Established	Not Established	Not Established	Not Established
Chloride salt	Not Established	Not Established	Not Established	Not Established

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

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Sulfamic acid 5329-14-6	*-	Not Established	
Chloride salt	*-	Not Established	

### **US State Regulations**

Chemical name	California Proposition 65
Sulfamic acid 5329-14-6	Not Established
Chloride salt	Not Established

### U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sulfamic acid 5329-14-6	X	Not Established	Not Established
Chloride salt	Not Established	Not Established	Not Established

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

### **16. OTHER INFORMATION**

### Page 6/7



Disclaimer The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet

Page 7/7



# **Safety Data Sheet**

OSHA format **Revision Number** 0

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier	
Product name	Salicylate Ammonia #1
Other means of identificatio	n .
Product Code(s)	3978
UN-No	1824
Recommended use of the cl	hemical and restrictions on use
Recommended Use	Use as a laboratory reagent. Industrial (not for food or food contact use). Laboratory chemicals.
Details of the supplier of the	e safety data sheet
	Manufacturer Address
	LaMotte Company, Inc.

Lamote Company, Inc. 802 Washington Avenue P.O. Box 329 Chestertown, MD 21620 USA T 410-778-3100 F 410-778-9748

Emergency telephone numbers (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

Page 1/8

### 2. HAZARDS IDENTIFICATION

Skin corrosion/imitation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1

# **EMERGENCY OVERVIEW** DANGER Hazard statements Causes severe skin burns and eye damage. Appearance Clear, colorless Physical state liquid Odor None

### **Precautionary Statements - Prevention**

Do not taste or swallow. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

### Response: Immediately call a poison center or physician.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF SWALLOWED:. Rinse mouth. Do NOT induce vomiting.

Storage: Store locked up. Disposal:

Dispose of contents/container to an approved waste disposal plant.

Unknown Acute Toxicity 40% of the mixture consists of ingredient(s) of unknown toxicity.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS\* **Chemical name** CAS No. Weight-% Sodium hydroxide 1310-73-2 <5 Sodium citrate, dihydrate 6132-04-3 25

LaMotte Company proprietary formulation under the State of New Jersey Trade Secret Protection Law, assigned the NJTSRN 80100291-5038p, and may be disclosed only in a medical emergency All ingredients may not be listed. Ingredients not listed do not meet the reporting requirements of the OSHA Hazard Communication Standard (HCS) as specified in 29 CFR 1910.1200.

### 4. FIRST AID MEASURES

### **First Aid Measures**

**General** advice

Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray.

Page 2/8

### 3978 \*- Salicylate Ammonia #1

Use personal protection recommended in Section 8. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.
Do NOT induce vomiting. Drink plenty of water. Clean mouth with water. Call a physician immediately. Never give anything by mouth to an unconscious person.
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.
Wash off immediately with plenty of water for at least 15 minutes. Remove and isolate contaminated clothing and shoes. Wash contaminated clothing before reuse. Call a physician immediately.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Call a physician immediately.

Suitable extinguishing media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

	6. ACCIDENTAL RELEASE MEASURES	
Personal precautions, protectiv	e equipment and emergency procedures	
Personal precautions	Ensure adequate ventilation. Use personal protection recommended in Section 8.	
Environmental precautions	See Section 12 for additional Ecological Information. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.	
Methods and material for conta	inment and cleaning up	
Methods for containment	Soak up with inert absorbent material, containerize, and hold for disposal. Dispose according to federal, state, and local regulations.	
Methods for cleaning up	Neutralize spill with acidic material (dilute acid); containerize, and hold for later disposal. If local regulations permit, dilute with water and rinse to drain with excess water. After cleaning, flush away traces with water.	
	7. HANDLING AND STORAGE	
Precautions for safe handling		
Handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes. Do not taste or swallow. Do not eat, drink, or smoke when using this product.	
Conditions for safe storage, inc	luding any incompatibilities	

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

Strong oxidizing agents.

**Incompatible Products** 

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Page 3/8

### Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium hydroxide 1310-73-2	Ceiling: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup> (vacated) Ceiling: 2 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> Ceiling: 2 mg/m <sup>3</sup>
Sodium citrate, dihydrate 6132-04-3	*-		Not Established

NIOSH IDLH: Immediately Dangerous to Life or Health

### Appropriate engineering controls

Engineering Measures	Showers Eyewash stations Ventilation systems.
Individual protection measures	s, such as personal protective equipment
Eye/Face Protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Wear protective gloves/clothing.
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Take off contaminated clothing and wash before reuse.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Physical state	liquid		
Appearance	Clear, colorless	Odor	None
Property	Values	Remarks • Method	
рН	12.5-13		
Melting point / freezing point	No information available		
Boiling point / boiling range	No information available		
Flash point	Not Applicable		
Evaporation rate			
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Specific gravity	No information available		
Water solubility	No information available		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		
Other Information			
Softening point	No information available		
	Page 4/8		

Molecular weight VOC Content (%) Density Bulk density	No information available No information available No information available No information available	
	10. STABILITY AND REACTIVITY	
Stability Hazardous polymerization	Stable under normal conditions of use and storage. Hazardous polymerization does not occur.	
Conditions to avoid	Extremes of temperature and direct sunlight.	

Strong oxidizing agents. Incompatible materials

Hazardous decomposition products Hazardous decomposition products formed under fire conditions -. Carbon oxides (COx).

### **11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure

### **Component identification**

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Sodium hydroxide 1310-73-2	Not Established	= 1350 mg/kg ( Rabbit )	Not Established
Sodium citrate, dihydrate 6132-04-3	Not Established	Not Established	Not Established

### Information on toxicological effects

Chemical name	ACGIH	IARC	NTP	OSHA
Sodium hydroxide 1310-73-2	Not Established	Not Established	Not Established	Not Established
Sodium citrate, dihydrate 6132-04-3	Not Established	Not Established	Not Established	Not Established

ATEmix (oral) ATEmix (dermal)

11,160.00 mg/kg 27,000.00 mg/kg

### **12. ECOLOGICAL INFORMATION**

Ecotoxicity Unknown Aquatic Toxicity 67 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Sodium hydroxide	Not Established	45.4: 96 h Oncorhynchus mykiss	Not Established
1310-73-2		mg/L LC50 static	
Sodium citrate, dihydrate	18000 - 32000: 96 h Chlorella	18000 - 32000: 96 h Poecilia	5600 - 10000: 48 h Daphnia
6132-04-3	vulgaris mg/L EC50	reticulata mg/L LC50	magna mg/L EC50

### Persistence and degradability

No information available.

# Bioaccumulation/Accumulation No information available.

Mobility No information available.

Chemical name	Log Pow
Sodium hydroxide 1310-73-2	Not Established
Sodium citrate, dihydrate 6132-04-3	Not Established



### 13. DISPOSAL CONSIDERATIONS

### **Disposal Methods**

Dispose of waste product or used containers according to local regulations.

Contaminated packaging

Do not reuse empty containers.

Chemical name	RCRA	RCRA - Basis for Listing	<b>RCRA - D Series Wastes</b>	RCRA - U Series Wastes
Sodium hydroxide 1310-73-2	Not Established	-	Not Established	Not Established
Sodium citrate, dihydrate 6132-04-3	Not Established		Not Established	Not Established

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Sodium hydroxide 1310-73-2	Not Established	Not Established	Not Established	Not Established
Sodium citrate, dihydrate 6132-04-3	Not Established	Not Established	Not Established	Not Established

Chemical name	California Hazardous Waste Status
Sodium hydroxide	Toxic
Sodium citrate, dihydrate 6132-04-3	*-

### 14. TRANSPORT INFORMATION

DOT	
Proper shipping name	SODIUM HYDROXIDE SOLUTION
UN-No	1824
Hazard Class	8
Packing group	III
TDG	Not regulated
MEX	Not regulated
ICAO	Not regulated
IATA	
UN-No	1824
Proper shipping name	SODIUM HYDROXIDE SOLUTION
Hazard Class	8
Packing group	III
IMDG/IMO	
UN-No	1824
Proper shipping name	SODIUM HYDROXIDE SOLUTION
Hazard Class	8
Packing group	III
RID	Not regulated
ADR	Not regulated
ADN	Not regulated
	15. REGULATORY INFORMATION
International Inventories TSCA	Does not comply

Page 6/8

DSL/NDSL	Does not comply
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Does not comply
KECL	Does not comply
PICCS	Does not comply
AICS	Does not comply

### 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 AICS - Australian Inventory of Chemical Substances

### 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 %	
Sodium hydroxide 1310-73-2	Not Established	
Sodium citrate, dihydrate 6132-04-3	Not Established	
SARA 311/312 Hazard Categories		
Acute health hazard	Yes	
Chronic Health Hazard	No	
Fire hazard	No	
Sudden release of pressure hazard	No	
Reactive Hazard	No	

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)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hydroxide 1310-73-2	1000 lb	Not Established	Not Established	x
Sodium citrate, dihydrate 6132-04-3	Not Established	Not Established	Not Established	Not Established

CERCLA This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Sodium hydroxide 1310-73-2	1000 lb	Not Established	RQ 1000 lb final RQ RQ 454 kg final RQ
Sodium citrate, dihydrate 6132-04-3		Not Established	*

### **US State Regulations**

Chemical name	California Proposition 65
Sodium hydroxide 1310-73-2	Not Established
Sodium citrate, dihydrate 6132-04-3	Not Established

U.S. State Right-to-Know Regulations

### Page 7/8

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sodium hydroxide 1310-73-2	x	X	x
Sodium citrate, dihydrate 6132-04-3	Not Established	Not Established	Not Established

### CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

Chemical name		CPSC	CPSC (Consumer Product Safety Commission) - Specially Regulated Substances	
	Sodium hydroxide 1310-73-2		Banned, 16 CFR 1500.17 Add POISON to label, 16 CFR 1500.129	
		16. OTHER INFORM	ATION	
NFPA	Health hazard 1	Flammability 0	Instability 0	Physical and Chemical
Health hazard 1	Flammability 0	Stability 0		Hazards N/A
1	>			
Health Hazard	1			
Fire Hazard	0			
Reactivity	0			
Prepared by Issuing Date Reason for revision	Regulate Mar-14- New GH	ory Affairs Department 2017 IS format		

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet

Page 8/8



Issuing Date Jun-22-2017

Revision Date May-10-2017

# Safety Data Sheet

**Revision Number** 0

-				
	A INCLUSION ATION OF TH	IT ALLDATANAE DOCA	DATION AND OF TH	E GOMBANN//INDEDTAI//NO
1.2	1 IDENTIFICATION OF TH	IE SUBSTANCE/DREDA	ARALION AND OF TH	E COMPANY/UNDER LAKING
100	I. IDENTIFICATION OF T	IL OUDOTANULI NEL	INATION AND OF THE	E GOINT ANTION DERTAINING

Product identifier	
Product name	Salicylate Ammonia #2
Other means of identificatio	n
Product Code(s)	3979
UN-No	3287
Recommended use of the c	hemical and restrictions on use
Recommended Use	Use as a laboratory reagent, Industrial (not for food or food contact use). Laboratory chemicals.
Details of the supplier of the	e safety data sheet
	Manufacturer Address
	LaMotte Company, Inc.
	802 Washington Avenue
	P.O. Box 329
	Chestertown, MD 21620 USA
	T 410-778-3100
	F 410-778-9748
Emergency telephone numb	bers
(CHEM-TEL):USA, Canada, F	Juerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585
	2. HAZARDS IDENTIFICATION
	EMERGENCY OVERVIEW
WARNING	
Hazard statements	
May be barmful if ewallowed	
way be narmul it swallowed.	

Appearance light orange Pale amber

Physical state liquid

Odor None

### **Precautionary Statements - Prevention**

Call a poison center or doctor/physician if you feel unwell. Do not handle until all safety precautions have been read and understood. Keep container tightly closed. Keep out of reach of children.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF SWALLOWED:. Drink 1 or 2 glasses of water.

Storage:

Store in a well-ventilated place. Keep cool.

Unknown Acute Toxicity 1.5% of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS\*

Page 1/7

٢

Chemical name	CAS No.	Weight-%	
Sodium nitroferricyanide dihydrate	13755-38-9	0.25	

4 FIRST AID MEASURES

Ingredients not specifically listed by name are proprietary to the LaMotte Company, registered under the State of New Jersey Trade Secret protection law, assigned the NJTSRN#80100291-5039p, and may be disclosed only in a medical emergency

	4.1 INOT AID MICAGONED
First Aid Measures	
General advice	Do not get in eyes, on skin, or on clothing.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. Seek immediate medical attention/advice.
Inhalation	Remove to fresh air. If breathing is difficult, give oxygen. If symptoms occur, begin administration of antidote kit and oxygen using planned instructions. If not breathing, give artificial respiration and contact emergency personnel.
Ingestion	If ingested, initiate cyanide antidote administration and give oxygen. Give activated charcoal. Immediate medical attention is required. Call a physician or poison control center immediately.
Self-protection of the first aider	Use personal protection recommended in Section 8. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

**5. FIREFIGHTING MEASURES** 

Suitable extinguishing media Dry chemical, CO 2, alcohol-resistant foam or water spray.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

	6. ACCIDENTAL RELEASE MEASURES	
Personal precautions, protectiv	e equipment and emergency procedures	
Personal precautions	Ensure adequate ventilation. Use personal protective equipment. See section 8.	
Environmental precautions	See Section 12 for additional Ecological Information. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.	
Methods and material for conta	inment and cleaning up	
Methods for containment	Dispose according to federal, state, and local regulations. Soak up with inert absorben material, containerize, and hold for disposal.	
Methods for cleaning up	Clean contaminated surface thoroughly. After cleaning, flush away traces with water.	
	7. HANDLING AND STORAGE	
Precautions for safe handling		
Handling	Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid contact with skin and eyes. Do not taste or swallow. Do not eat, drink, or	

Page 2/7

	smoke when using this produ	ct.			
Conditions for safe storage, includ	ding any incompatibilities				
Storage:	Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from light. Keep out of the reach of children.				
Incompatible Products	Strong oxidizing agents. Strong acids.				
8. E)	POSURE CONTROLS/PI	ERSONAL PROTECTION			
Control parameters					
Chemical name	ACGIHTLY	OSHA PEL	NIOSH IDLH		
Sodium nitroferricyanide dihydrate 13755-38-9	TWA: 1 mg/m <sup>3</sup> Fe	TWA: 5 mg/m <sup>3</sup> CN (vacated) TWA: 1 mg/m <sup>3</sup> Fe (vacated) TWA: 5 mg/m <sup>3</sup>	IDLH: 25 mg/m <sup>3</sup> CN TWA: 1 mg/m <sup>3</sup> Fe		
NIOSH IDLH: Immediately Dangero	us to Life or Health	3			
Appropriate engineering controls					
Engineering Measures	Showers Eyewash stations Ventilation systems.				
Individual protection measures, su	uch as personal protective equ	uipment			
Eye/Face Protection	Wear safety glasses with side	Wear safety glasses with side shields (or goggles).			
	Gloves & Lab Coat. Impervious clothing. Protective gloves. Nitrile rubber.				
Skin and body protection	Gloves & Lab Coat. Impervio	us clothing. Protective gloves. Nite	rile rubber.		
Skin and body protection Respiratory protection	Gloves & Lab Coat. Impervio When workers are facing con appropriate certified respirato	us clothing. Protective gloves. Nite centrations above the exposure li ors.	rile rubber. mit they must use		
Skin and body protection Respiratory protection Hygiene Measures	Gloves & Lab Coat. Impervious When workers are facing com appropriate certified respirato Handle in accordance with go smoke when using this product.	us clothing. Protective gloves. Nit ecentrations above the exposure li- ors. bod industrial hygiene and safety j lot. Wash hands before breaks an	rile rubber. mit they must use practice. Do not eat, drink or d immediately after handling		
Skin and body protection Respiratory protection Hygiene Measures	Gloves & Lab Coat. Imperviou When workers are facing com appropriate certified respirato Handle in accordance with go smoke when using this product the product.	us clothing. Protective gloves. Nit incentrations above the exposure li- bors. and industrial hygiene and safety j lict. Wash hands before breaks an	rile rubber. mit they must use practice. Do not eat, drink or d immediately after handling		
Skin and body protection Respiratory protection Hygiene Measures	Gloves & Lab Coat. Impervio When workers are facing con appropriate certified respirato Handle in accordance with go smoke when using this product the product. 9. PHYSICAL AND CHEM	us clothing. Protective gloves. Nit ecentrations above the exposure li- bors. bod industrial hygiene and safety j loct. Wash hands before breaks an	rile rubber. mit they must use practice. Do not eat, drink or d immediately after handling		
Skin and body protection Respiratory protection Hygiene Measures Information on basic physical and	Gloves & Lab Coat. Imperviou When workers are facing com appropriate certified respirato Handle in accordance with go smoke when using this product the product. 9. PHYSICAL AND CHEM I chemical properties	us clothing. Protective gloves. Nit iccentrations above the exposure li ors. bod industrial hygiene and safety ict. Wash hands before breaks an	rile rubber. mit they must use practice. Do not eat, drink or d immediately after handling		
Skin and body protection Respiratory protection Hygiene Measures Information on basic physical and Physical state Appearance	Gloves & Lab Coat. Imperviou When workers are facing com appropriate certified respirato Handle in accordance with go smoke when using this product the product. 9. PHYSICAL AND CHEM I chemical properties liquid light orange Pale amber	us clothing. Protective gloves. Nit iccentrations above the exposure lib ors. bod industrial hygiene and safety ict. Wash hands before breaks an <b>MICAL PROPERTIES</b>	rile rubber. mit they must use practice. Do not eat, drink or d immediately after handling		
Skin and body protection Respiratory protection Hygiene Measures Information on basic physical and Physical state Appearance <u>Property</u>	Gloves & Lab Coat. Imperviou When workers are facing com appropriate certified respirato Handle in accordance with go smoke when using this product the product. 9. PHYSICAL AND CHEM I chemical properties liquid light orange Pale amber Values	us clothing. Protective gloves. Nit iccentrations above the exposure lib ors. bod industrial hygiene and safety ict. Wash hands before breaks an <b>MICAL PROPERTIES</b> Odor <u>Remarks • Method</u>	rile rubber. mit they must use practice. Do not eat, drink or d immediately after handling		
Skin and body protection Respiratory protection Hygiene Measures Information on basic physical and Physical state Appearance Property	Gloves & Lab Coat. Imperviou When workers are facing com appropriate certified respirato Handle in accordance with go smoke when using this product the product. 9. PHYSICAL AND CHEM I chemical properties liquid light orange Pale amber Values	us clothing. Protective gloves. Nit iccentrations above the exposure li- ors. bod industrial hygiene and safety j ict. Wash hands before breaks an <b>AICAL PROPERTIES</b> Odor <u>Remarks • Method</u>	rile rubber. mit they must use practice. Do not eat, drink or d immediately after handling		
Skin and body protection Respiratory protection Hygiene Measures Information on basic physical and Physical state Appearance Property pH Melting point / freezing point	Gloves & Lab Coat. Imperviou When workers are facing com appropriate certified respirato Handle in accordance with go smoke when using this product the product. 9. PHYSICAL AND CHEM I chemical properties liquid light orange Pale amber Values 9 No information available	us clothing. Protective gloves. Nit incentrations above the exposure li- bors. bod industrial hygiene and safety j ict. Wash hands before breaks an <b>MICAL PROPERTIES</b> Odor <u>Remarks • Method</u>	rile rubber. mit they must use practice. Do not eat, drink or d immediately after handling		
Skin and body protection Respiratory protection Hygiene Measures Information on basic physical and Physical state Appearance Property pH Melting point / freezing point Boiling point / boiling range	Gloves & Lab Coat. Imperviou When workers are facing com appropriate certified respirato Handle in accordance with go smoke when using this product the product. 9. PHYSICAL AND CHEM I chemical properties liquid light orange Pale amber Values 9 No information available No information available	us clothing. Protective gloves. Nit incentrations above the exposure li- bors. bod industrial hygiene and safety j inct. Wash hands before breaks an <b>MICAL PROPERTIES</b> Odor <u>Remarks • Method</u>	rile rubber. mit they must use practice. Do not eat, drink or d immediately after handling		
Skin and body protection Respiratory protection Hygiene Measures Information on basic physical and Physical state Appearance Property pH Melting point / freezing point Boiling point / boiling range Flash point	Gloves & Lab Coat. Impervio When workers are facing con appropriate certified respirato Handle in accordance with go smoke when using this product the product. 9. PHYSICAL AND CHEN I chemical properties liquid light orange Pale amber Values 9 No information available No information available No information available Not Applicable	us clothing. Protective gloves. Nit incentrations above the exposure li- bors. bod industrial hygiene and safety j inct. Wash hands before breaks an <b>MICAL PROPERTIES</b> Odor <u>Remarks • Method</u>	rile rubber. mit they must use practice. Do not eat, drink or d immediately after handling		
Skin and body protection Respiratory protection Hygiene Measures Information on basic physical and Physical state Appearance Property pH Melting point / freezing point Boiling point / boiling range Flash point Evaporation rate	Gloves & Lab Coat. Impervio When workers are facing con appropriate certified respirato Handle in accordance with go smoke when using this product the product. 9. PHYSICAL AND CHEN I chemical properties liquid light orange Pale amber Values 9 No information available No information available Not Applicable	us clothing. Protective gloves. Nit incentrations above the exposure li- bors. bod industrial hygiene and safety j inct. Wash hands before breaks an <b>MICAL PROPERTIES</b> Odor <u>Remarks • Method</u>	rile rubber. mit they must use practice. Do not eat, drink or d immediately after handling		
Skin and body protection Respiratory protection Hygiene Measures Information on basic physical and Physical state Appearance Property pH Melting point / freezing point Boiling point / boiling range Flash point Evaporation rate Flammability (solid, gas) Flammability Limit in Air	Gloves & Lab Coat. Imperviou When workers are facing com appropriate certified respirato Handle in accordance with go smoke when using this product the product. 9. PHYSICAL AND CHEM I chemical properties liquid light orange Pale amber Values 9 No information available Not Applicable No information available	us clothing. Protective gloves. Nit incentrations above the exposure li- bors. bod industrial hygiene and safety j inct. Wash hands before breaks an <b>MICAL PROPERTIES</b> Odor <u>Remarks • Method</u>	rile rubber. mit they must use practice. Do not eat, drink or d immediately after handling		
Skin and body protection Respiratory protection Hygiene Measures Information on basic physical and Physical state Appearance Property pH Melting point / freezing point Boiling point / boiling range Flash point Evaporation rate Flammability (solid, gas) Flammability Limit in Air Upper flammability limit:	Gloves & Lab Coat. Imperviou When workers are facing com appropriate certified respirato Handle in accordance with go smoke when using this product the product. 9. PHYSICAL AND CHEM I chemical properties liquid light orange Pale amber Values 9 No information available No information available No information available No information available	us clothing. Protective gloves. Nit incentrations above the exposure li- bors. and industrial hygiene and safety just. Wash hands before breaks an <b>AICAL PROPERTIES</b> Odor <u>Remarks • Method</u>	rile rubber. mit they must use practice. Do not eat, drink or d immediately after handling		
Skin and body protection Respiratory protection Hygiene Measures Information on basic physical and Physical state Appearance Property pH Melting point / freezing point Boiling point / boiling range Flash point Evaporation rate Flammability (solid, gas) Flammability Limit in Air Upper flammability limit: Lower flammability limit:	Gloves & Lab Coat. Imperviou When workers are facing com appropriate certified respirato Handle in accordance with go smoke when using this product the product. 9. PHYSICAL AND CHEM I chemical properties liquid light orange Pale amber Values 9 No information available No information available No information available No information available No information available No information available	us clothing. Protective gloves. Nit incentrations above the exposure li- bors. and industrial hygiene and safety just. Wash hands before breaks an <b>AICAL PROPERTIES</b> Odor <u>Remarks • Method</u>	rile rubber. mit they must use practice. Do not eat, drink or d immediately after handling		
Skin and body protection Respiratory protection Hygiene Measures Information on basic physical and Physical state Appearance Property pH Melting point / freezing point Boiling point / boiling range Flash point Evaporation rate Flammability (solid, gas) Flammability Limit in Air Upper flammability limit: Lower flammability limit: Vapor pressure	Gloves & Lab Coat. Impervious When workers are facing com appropriate certified respirato Handle in accordance with go smoke when using this product the product. 9. PHYSICAL AND CHEM I chemical properties liquid light orange Pale amber Values 9 No information available No information available	us clothing. Protective gloves. Nit incentrations above the exposure li- bors. and industrial hygiene and safety in the Wash hands before breaks an <b>AICAL PROPERTIES</b> Odor <u>Remarks • Method</u>	rile rubber. mit they must use practice. Do not eat, drink or d immediately after handling		
Skin and body protection Respiratory protection Hygiene Measures Information on basic physical and Physical state Appearance Property pH Melting point / freezing point Boiling point / boiling range Flash point Evaporation rate Flammability (solid, gas) Flammability Limit in Air Upper flammability limit: Lower flammability limit: Vapor pressure Vapor density	Gloves & Lab Coat. Impervious When workers are facing com appropriate certified respirato Handle in accordance with go smoke when using this product the product. 9. PHYSICAL AND CHEM I chemical properties liquid light orange Pale amber Values 9 No information available No information available	us clothing. Protective gloves. Nit incentrations above the exposure li- bors. and industrial hygiene and safety in act. Wash hands before breaks an <b>AICAL PROPERTIES</b> Odor <u>Remarks • Method</u>	rile rubber. mit they must use practice. Do not eat, drink or d immediately after handling None		
Skin and body protection Respiratory protection Hygiene Measures Information on basic physical and Physical state Appearance Property pH Melting point / freezing point Boiling point / boiling range Flash point Evaporation rate Flammability (solid, gas) Flammability Limit in Air Upper flammability limit: Lower flammability limit: Vapor pressure Vapor density Specific gravity	Gloves & Lab Coat. Impervious When workers are facing com appropriate certified respirato Handle in accordance with go smoke when using this product the product. 9. PHYSICAL AND CHEM I chemical properties liquid light orange Pale amber Values 9 No information available No information available	us clothing. Protective gloves. Nit incentrations above the exposure li- bors. and industrial hygiene and safety just. Wash hands before breaks an <b>AICAL PROPERTIES</b> Odor <u>Remarks • Method</u>	rile rubber. mit they must use practice. Do not eat, drink or d immediately after handling None		
Skin and body protection Respiratory protection Hygiene Measures Information on basic physical and Physical state Appearance Property pH Melting point / freezing point Boiling point / boiling range Flash point Evaporation rate Flammability (solid, gas) Flammability Limit in Air Upper flammability limit: Lower flammability limit: Vapor pressure Vapor density Specific gravity Water solubility	Gloves & Lab Coat. Impervious When workers are facing com appropriate certified respirato Handle in accordance with go smoke when using this product the product. 9. PHYSICAL AND CHEM I chemical properties liquid light orange Pale amber Values 9 No information available No information available	us clothing. Protective gloves. Nith contrations above the exposure li- bors. bod industrial hygiene and safety j loct. Wash hands before breaks an <b>AICAL PROPERTIES</b> Odor <u>Remarks • Method</u>	rile rubber. mit they must use practice. Do not eat, drink or d immediately after handling None		

Page 3/7

	10. STABILITY AND REACTIVITY	
Bulk density	No information available	
Density	No information available	
VOC Content (%)	No information available	
Molecular weight	No information available	
Softening point	No information available	
Other Information		
Oxidizing properties	No information available	
Explosive properties	No information available	
Dynamic viscosity	No information available	
Kinematic viscosity	No information available	
Decomposition temperature	No information available	
Autoignition temperature	No information available	
Partition coefficient		

Stability	Stable under recommended storage conditions
Hazardous Reactions	Reacts with acids to liberate toxic and flammable hydrogen cvanide gas.
nazaruous Reactions	Nebela with dolds to noticate tonic and naminable right egen systems gas.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Excessive heat. Incompatible Products.
Incompatible materials	Strong oxidizing agents. Strong acids.
	the to the second second with the second with the second itigs of the second itigs of the second secon

Hazardous decomposition products Hazardous decomposition products formed under fire conditions -. Carbon oxides (COx). Nitrogen oxides (NOx). Hydrogen cyanide.

### **11. TOXICOLOGICAL INFORMATION**

### Information on likely routes of exposure

Component identification				
Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50	
Sodium nitroferricyanide dihydrate 13755-38-9	= 99 mg/kg (Rat)	Not Established	Not Established	

### Information on toxicological effects

Chemical name	ACGIH	IARC	NTP	OSHA
Sodium nitroferricyanide dihydrate 13755-38-9	Not Established	Not Established	Not Established	Not Established

ATEmix (oral)

9,900.00 mg/kg

### **12, ECOLOGICAL INFORMATION**

### Ecotoxicity

Jnknown Aquatic Toxicity 100 % of the mixture consists of components(s) of unknown hazards to the aquatic environment				
Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)	
Sodium nitroferricyanide dihydrate 13755-38-9	Not Established	Not Established	Not Established	

# Persistence and degradability No information available.

# Bioaccumulation/Accumulation No information available.

Page 4/7

Mobility No information available.

Chemical name	Log Pow	
Sodium nitroferricyanide dihydrate 13755-38-9	Not Established	

### **13. DISPOSAL CONSIDERATIONS**

**Disposal Methods** 

Dispose of waste product or used containers according to local regulations. This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

Contaminated packaging

Do not reuse empty containers.

Chemical name	RCRA	RCRA - Basis for Listing		A RCRA - Basis for Listing RCRA - D Series Wast	RCRA - D Series Wastes	RCRA - U Series Wastes	
Sodium nitroferricyanide dihydrate 13755-38-9	Not Established			Not Established	Not Established		
Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Ser	les Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes		
Sodium nitroferricyanide dihydrate 13755-38-9	Not Established	Not Established		Not Established	Not Established		
	chemical name	1		California Hazardous Wa	aste Status		
Sodium nitroferricyanide dihydrate 13755-38-9				*_			

### **14. TRANSPORT INFORMATION**

DOT		
Proper shipping name	TOXIC LIQUID, INORGANIC, N.O.S.(0.25% Sodium Nitroferricyanide)	
Hazard Class	61	
Packing group		
a doming a corp		
TDG	Not regulated	
MEX	Not regulated	
ICAO	Not regulated	
IATA		
UN-No	3287	
Proper shipping name	TOXIC LIQUID, INORGANIC, N.O.S. (0.25% Sodium Nitroferricyanide)	
Hazard Class	6.1	
Packing group		
IMDG/IMO		
UN-No	3287	
Proper shipping name	TOXIC LIQUID, INORGANIC, N.O.S. (0.25% Sodium Nitroferricyanide)	
Hazard Class	6.1	
Packing group	III	
RID	Not regulated	
ADR	Not regulated	
ADN	Not regulated	

Page 5/7

**15. REGULATORY INFORMATION** 

International Inventories	
TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

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 AICS - Australian Inventory of Chemical Substances

### 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 %
Sodium nitroferricyanide dihydrate 13755-38-9	1.0
SARA 311/312 Hazard Categories	
Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

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)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium nitroferricyanide dihydrate 13755-38-9	Not Established	X	X	Not Established

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

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Sodium nitroferricyanide dihydrate 13755-38-9	*	Not Established	•

### **US State Regulations**

California Proposition 65 WARNING! This product contains a chemcial known to the State of California to cause birth defects or other reproductive harm.

Chemical name	California Proposition 65
Sodium nitroferricyanide dihydrate	Not Established



### U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sodium nitroferricyanide dihydrate 13755-38-9	x	Not Established	X

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

16. OTHER INFORMATION				
NFPA	Health hazard 2	Flammability 0	Instability 0	Physical and Chemical Hazards N/A
2				
Health Hazard	2			
Reactivity	0			
Prepared by Issuing Date Revision Date Reason for revision Disclaimer	Regulate Jun-22-2 May-10- New GH	ory Affairs Department 2017 2017 IS format		

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet

Page 7/7



Safety Data Sheet

**Revision Number** 0

Revision Date Oct-03-2016

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

<u>Product identifier</u> Product name	SALICYLATE AMMONIA #3	
Other means of identification		
Product Code(s)	3982	
Recommended use of the chem	nical and restrictions on use	
Recommended Use	Use as a laboratory reagent, Laboratory chemical use).	s. Industrial (not for food or food contact
Details of the supplier of the sa	ifety data sheet	
	Manufacturer Address	
	LaMotte Company, Inc.	
	802 Washington Avenue	
	P.O. Box 329 Chastadown, MD 21620, USA	
	T 410-778-3100	
	F 410-778-9748	
Emergency telephone numbers (CHEM-TEL):USA, Canada, Puer	to Rico 1-800-255-3924 Outside North American Contin	nent (Call collect) 813-248-0585
	2. HAZARDS IDENTIFICATION	
	EMERGENCY OVERVIEW	
Annearance Clear colorless	Physical state liquid	Odor characteristic Chloring
Appearance Clear, coloness	Priysical state liquid	
Precautionary Statements - Pre Keep out of the reach of children.	evention	
IF IN EYES: Rinse cautiously with IF ON SKIN: Wash with plenty of IF INHALED: Remove victim to fr IF SWALLOWED:. Drink 1 or 2 g	h water for several minutes. Remove contact lenses, if p soap and water. Take off contaminated clothing and wa esh air and keep at rest in a position comfortable for bre lasses of water. Call a physician immediately.	present and easy to do. Continue rinsing. ash before reuse. eathing.
Storage: Store in a well-ventilated place. K	Keep cool.	
Other Hazards	effects	
. She is adams ins mirriorg maning		
3	. COMPOSITION/INFORMATION ON INGRE	DIENTS*
Chaminal	CASNO	Weight-%

CAS No.

Weight-%

Page 1/7

### 3982 \*- SALICYLATE AMMONIA #3

Issuing Date Jun-01-2015

Sodium hypochlorite		7681-52-9			<0.5
	4. F	RST AID MEASUR	RES		
First Aid Measures					
General advice	Do not get in eyes, on skin, or on clothing.				
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.				
Skin contact	Wash skin with	soap and water. Consi	ult a physician if	necessary.	
Inhalation	Not expected to	o require first aid measu	ires. Remove to	fresh air.	
Ingestion	Drink 1 or 2 gla	isses of water. Consult	a physician if ne	ecessary.	
Self-protection of the first aider	Do not use mor artificial respira proper respirate	uth-to-mouth method if tion with the aid of a po ory medical device. Use	victim ingested ocket mask equip personal prote	or inhaled the pped with a on ction recomme	substance; give le-way valve or other anded in Section 8.
	5. FIRE	EFIGHTING MEAS	URES		
Protective equipment and precaut As in any fire, wear self-contained bi protective gear.	tions for firefighte	e <b>rs</b> s pressure-demand, MS	HA/NIOSH (app	proved or equiv	valent) and full
Protective equipment and precaut As in any fire, wear self-contained by protective gear.	tions for firefighter reathing apparatus 6. ACCIDEI	e <u>rs</u> s pressure-demand, MS NTAL RELEASE M	HA/NIOSH (app	proved or equiv	valent) and full
Protective equipment and precaut As in any fire, wear self-contained by protective gear. Personal precautions, protective e	tions for firefighter reathing apparatus 6. ACCIDEI equipment and en See section 8.	ers s pressure-demand, MS NTAL RELEASE M mergency procedures	HA/NIOSH (app I <b>EASURES</b>	proved or equiv	valent) and full
Protective equipment and precaut As in any fire, wear self-contained by protective gear. Personal precautions, protective e Personal precautions	tions for firefighter reathing apparatus 6. ACCIDEI equipment and en See section 8. See Section 12	ers s pressure-demand, MS NTAL RELEASE M mergency procedures	HA/NIOSH (app EASURES	proved or equiv	valent) and full
Protective equipment and precaut As in any fire, wear self-contained bi protective gear. Personal precautions, protective e Personal precautions Environmental precautions	tions for firefighter reathing apparatus 6. ACCIDEI equipment and en See section 8. See Section 12 form explosive	ers pressure-demand, MS NTAL RELEASE M mergency procedures 2 for additional Ecologic concentrations. Vapors	HA/NIOSH (app EASURES - al Information. E	proved or equiv Beware of vapo e in low areas.	valent) and full
Protective equipment and precaut As in any fire, wear self-contained bi protective gear. Personal precautions, protective e Personal precautions Environmental precautions Methods and material for contains	tions for firefighter reathing apparatus 6. ACCIDEI equipment and en See section 8. See Section 12 form explosive ment and cleanin	ers s pressure-demand, MS NTAL RELEASE M mergency procedures for additional Ecologic concentrations. Vapors g up	HA/NIOSH (app EASURES - al Information. E can accumulate	Beware of vapo a in low areas.	valent) and full
Protective equipment and precaut As in any fire, wear self-contained bi protective gear. Personal precautions, protective of Personal precautions Environmental precautions Methods and material for contained Methods for containment	tions for firefighte reathing apparatus 6. ACCIDEI equipment and en See section 12 form explosive ment and cleanin Contain and co diatomaceous a national regula	ers s pressure-demand, MS NTAL RELEASE M mergency procedures 2 for additional Ecologic concentrations. Vapors g up ollect spillage with non-c earth, vermiculite) and p tions (see Section 13).	HA/NIOSH (app EASURES al Information. E can accumulate combustible absolace in containe	Beware of vapo a in low areas. orbent materia	valent) and full ors accumulating to al, (e.g. sand, earth, according to local /
Protective equipment and precaut As in any fire, wear self-contained bi protective gear. Personal precautions, protective e Personal precautions Environmental precautions Methods and material for contained Methods for containment Methods for cleaning up	tions for firefighte reathing apparatus 6. ACCIDEI equipment and en See section 8. See Section 12 form explosive ment and cleanin Contain and co diatomaceous national regulati with water.	ers pressure-demand, MS <b>NTAL RELEASE M</b> <b>mergency procedures</b> 2 for additional Ecologic concentrations. Vapors <b>g up</b> pllect spillage with non-c earth, vermiculite) and p tions (see Section 13). ons permit, rinse to drai	HA/NIOSH (app EASURES - al Information. E can accumulate combustible absolace in containe n with excess w	Beware of vapo e in low areas. orbent materia er for disposal	valent) and full ors accumulating to al, (e.g. sand, earth, according to local / aning, flush away trace
Protective equipment and precaut As in any fire, wear self-contained bi protective gear. Personal precautions, protective e Personal precautions Environmental precautions Methods and material for contained Methods for containment Methods for cleaning up	tions for firefighter reathing apparatus 6. ACCIDEI equipment and en See section 8. See Section 12 form explosive ment and cleanin Contain and co diatomaceous national regulativity with water.	Arr. Arr.	HA/NIOSH (app EASURES - al Information. E can accumulate combustible abso place in containe n with excess w RAGE	Beware of vapo e in low areas. orbent materia er for disposal	valent) and full ors accumulating to al, (e.g. sand, earth, according to local / aning, flush away trace
Protective equipment and precaut As in any fire, wear self-contained bi protective gear. Personal precautions, protective of Personal precautions Environmental precautions Methods and material for contained Methods for containment Methods for cleaning up Precautions for safe handling	tions for firefightereathing apparatus 6. ACCIDEL equipment and en See section 8. See Section 12 form explosive ment and cleanin Contain and co diatomaceous national regulativity with water. 7. HAM	ers pressure-demand, MS NTAL RELEASE M mergency procedures 2 for additional Ecologic concentrations. Vapors g up ellect spillage with non-c earth, vermiculite) and p tions (see Section 13). ons permit, rinse to drain NDLING AND STO	HA/NIOSH (app EASURES - al Information. E can accumulate combustible abso place in containe n with excess w RAGE	Beware of vapo e in low areas. orbent materia er for disposal vater. After clea	valent) and full ors accumulating to al, (e.g. sand, earth, according to local / aning, flush away trace
Protective equipment and precaut As in any fire, wear self-contained bip protective gear. Personal precautions, protective of Personal precautions Environmental precautions Methods and material for container Methods for containment Methods for cleaning up Precautions for safe handling Handling	tions for firefighter reathing apparatus 6. ACCIDEI equipment and en See section 8. See Section 12 form explosive ment and cleanin Contain and co diatomaceous national regulative with water. 7. HAN Handle in acco skin, eyes, and this product.	ers pressure-demand, MS NTAL RELEASE M mergency procedures 2 for additional Ecologic concentrations. Vapors g up ollect spillage with non-c earth, vermiculite) and p tions (see Section 13). ons permit, rinse to drain NDLING AND STO ordance with good indus 1 clothing. Do not taste of	HA/NIOSH (app EASURES al Information. E can accumulate combustible absolace in containe n with excess w RAGE trial hygiene and or swallow. Do n	Beware of vapo a in low areas. orbent materia er for disposal vater. After clea	valent) and full ors accumulating to al, (e.g. sand, earth, according to local / aning, flush away trace ce. Prevent contact wi or smoke when using
Protective equipment and precaut As in any fire, wear self-contained bi protective gear. Personal precautions, protective of Personal precautions Environmental precautions Methods and material for container Methods for containment Methods for cleaning up Precautions for safe handling Handling Conditions for safe storage, inclue	tions for firefighter reathing apparatus 6. ACCIDEI equipment and er See section 8. See Section 12 form explosive ment and cleanin Contain and co diatomaceous national regulative with water. 7. HAN Handle in acco skin, eyes, and this product.	Arr. Arr.	HA/NIOSH (app EASURES al Information. E can accumulate combustible absolace in containe n with excess w RAGE trial hygiene and or swallow. Do n	Beware of vapo a in low areas. orbent materia er for disposal vater. After clea	valent) and full ors accumulating to al, (e.g. sand, earth, according to local / aning, flush away trace

Page 2/7

Incompatible Products

None known based on information supplied.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH		
Sodium hypochlorite 7681-52-9		*	Not Established		
Appropriate engineering control	ols				
Engineering Measures	Showers Eyewash stations Ventilation systems.				
Individual protection measures	s, such as personal protective equ	ipment			
Eye/Face Protection	Wear safety glasses with side shields (or goggles).				
Skin and body protection	Protective gloves.				
Respiratory protection	None required under normal u	sage. Maintain adequate vent	ilation.		
Hygiene Measures	Handle in accordance with go breaks and immediately after this product.	od industrial hygiene and safe handling the product. Do not e	ty practice. Wash hands before at, drink or smoke when using		

9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Physical state	liquid		
Appearance	Clear, colorless	Odor	characteristic Chlorine
Property	Values	Remarks • Met	thod
pH			
Melting point / freezing point	No information available		
Boiling point / boiling range	ca 100 °C / 212 °F		
Flash point	Not Applicable		
Evaporation rate	100-111-00-000		
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Specific gravity	No information available		
Water solubility	No information available		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		
Other Information			
Softening point	No information available		
	Page 3/7		

Issuing Date Jun-01-2015

Molecular weight	No information available				
VOC Content (%)	No information available				
Density	No information available				
Bulk density	No information available				
A transfer and the second s	10. STABILITY AND REACTIVITY				
Stability	Stable under normal conditions of use and storage. Heat and sunlight can contribute to				
Hazardous polymerization	Hazardous polymerization does not occur.				
Conditions to avoid	Excessive heat. Direct sunlight.				

Incompatible materials None known based on information supplied.

Hazardous decomposition products None under normal use.

### **11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure

### **Component identification**

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Sodium hypochlorite 7681-52-9	= 8200 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	Not Established

### Information on toxicological effects

Chemical name	ACGIH	IARC	NTP	OSHA
Sodium hypochlorite 7681-52-9	Not Established	Group 3	Not Established	Not Established

Group 3 - Not classifiable as to its carcinogenicity to humans

### **12. ECOLOGICAL INFORMATION**

Ecotoxicity Toxic to aquatic life with long lasting effects

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Sodium hypochlorite 7681-52-9	0.095: 24 h Skeletonema costatum mg/L EC50	0.03 - 0.19: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 0.05 - 0.771: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.06 - 0.11: 96 h Pimephales promelas mg/L LC50 flow-through 0.18 - 0.22: 96 h Oncorhynchus mykiss mg/L LC50 static 0.28 - 1: 96 h Lepomis macrochirus mg/L LC50 flow-through 0.4 - 0.8: 96 h Lepomis macrochirus mg/L LC50 static 4.5 - 7.6: 96 h Pimephales promelas mg/L LC50 static	0.033 - 0.044: 48 h Daphnia magna mg/L EC50 Static 2.1: 96 h Daphnia magna mg/L EC50

# Persistence and degradability No information available.

# Bioaccumulation/Accumulation No information available.

Chemical name	Log Pow	
Sodium hypochlorite 7681-52-9	Not Established	

Page 4/7
# 13. DISPOSAL CONSIDERATIONS

**Disposal Methods** 

Dispose of waste product or used containers according to local regulations.

Contaminated packaging

Do not reuse empty containers.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes	
Sodium hypochlorite Not Established - 7681-52-9		-	Not Established	Not Established	
Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes	
Sodium hypochlorite 7681-52-9	Not Established	Not Established	Not Established	Not Established	
	Chemical name		California Hazardous W	aste Status	
S	dium hypochlorite		*_		

_	Chemical name	
	Sodium hypochlorite	
	7681-52-9	

# **14. TRANSPORT INFORMATION**

DOT	Not regulated
TDG	Not regulated
MEX	Not regulated
ICAO	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
RID	Not regulated
ADR	Not regulated
ADN	Not regulated

# **15. REGULATORY INFORMATION**

International Inventories	
TSCA	
DSL/NDSL	
EINECS/ELINCS	
ENCS	
IECSC	
KECL	
PICCS	
AICS	

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

Complies Complies Complies Complies Complies Complies Complies Complies

ENCCS - 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 AICS - Australian Inventory of Chemical Substances

Page 5/7

### **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 %
Sodium hypochlorite 7681-52-9	Not Established
SARA 311/312 Hazard Categories	
Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

### 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
Sodium hypochlorite 7681-52-9	100 lb	Not Established	Not Established	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

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Sodium hypochlorite 7681-52-9	100 lb	Not Established	RQ 100 lb final RQ RQ 45.4 kg final RQ

#### US State Regulations

Chemical name	California Proposition 65
Sodium hypochlorite 7681-52-9	Not Established

#### U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania	
Sodium hypochlorite 7681-52-9	X	x	X	

#### CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

### 16. OTHER INFORMATION

NFPA	Health hazard	0	Flammability 0	Instability 0	Physical and Chemical Hazards N/A
HMIS	Health hazard	1	Flammability 0	Stability 0	Hazalus N/A
0					
XY					
$\bigvee$					

Page 6/7

Health Hazard	1
Fire Hazard	•0
Reactivity	0

Prepared by Issuing Date **Revision Date** Reason for revision **Regulatory Affairs Department** Jun-01-2015 Oct-03-2016 Name change

Disclaimer The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet

Page 7/7



# Safety Data Sheet OSHA format Revision Number 0

# 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier	
Product name	MANGANOUS SULFATE SOLUTION
Other means of identification	on_
Product Code(s)	4167
Recommended use of the c	chemical and restrictions on use
Recommended Use	Laboratory chemicals. Industrial (not for food or food contact use). Chemical additive. Swimming pool chemicals.
Details of the supplier of th	e safety data sheet
	Manufacturer Address
	LaMotte Company, Inc.

802 Washington Avenue P.O. Box 329 Chestertown, MD 21620 USA T 410-778-3100 F 410-778-9748

Emergency telephone numbers (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

Page 1/8

	2. HAZAR	DS IDENTIFICATION	
Specific target organ toxicity (rep	peated exposure)		Category 2
	EMER	GENCY OVERVIEW	
WARNING			
Hazard statements May cause damage to organs th	rough prolonged or repea	ted exposure.	
Appearance Clear pink	Phy	sical state liquid	Odor Non
Precautionary Statements - Pr Do not breathe dust/fume/gas/m	evention ist/vapors/spray.		
F ON SKIN: Wash with plenty o F INHALED: Remove victim to f F SWALLOWED:. Drink 1 or 2 g Storage: Store in a well-ventilated place. I Disposal: Dispose of contents/container to	f soap and water. Take off resh air and keep at rest in lasses of water. Call a ph Keep cool. an approved waste dispo	f contaminated clothing and was n a position comfortable for brea ysician immediately. sal plant.	ih before reuse. athing.
O <b>ther Hazards</b> May be harmful if swallowed. Toxic t	o aquatic life with long lasting	effects.	
	. COMPOSITION/IN	FORMATION ON INGREE	DIENTS*
Chemical name		CAS No.	Weight-%
Manganese sulfate mon	ohydrate	10034-96-5	36
	4. FIRS	T AID MEASURES	
First Aid Measures			
General advice	Do not get in eyes,	on skin, or on clothing.	
Eye contact	Rinse immediately a physician immed	with plenty of water, also under iately.	the eyelids, for at least 15 minutes. Call
Skin contact	Wash off immediat	ely with soap and plenty of wate	er for at least 15 minutes. Take off

Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. Consult a physician if necessary.
Inhalation	Remove to fresh air. Call a physician immediately.
Ingestion	DO NOT induce vomiting unless directed to do so by a physician or poison control center.

Page 2/8

	Never give anything by mouth to an unconscious person. Call a physician immediately.
Self-protection of the first aider	Use personal protection recommended in Section 8. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.
	5. FIREFIGHTING MEASURES
Suitable extinguishing media Water spray, dry chemical, carbon d	ioxide (CO 2), or foam.
Protective equipment and precaut As in any fire, wear self-contained b protective gear.	tions for firefighters reathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full
	6. ACCIDENTAL RELEASE MEASURES
Personal precautions, protective	equipment and emergency procedures
Personal precautions	Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing.
Environmental precautions	See Section 12 for additional Ecological Information. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Methods and material for contain	ment and cleaning up
Methods for containment	Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).
Methods for cleaning up	Use personal protective equipment. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13). Following product recovery, flush area with water.
	7. HANDLING AND STORAGE
Precautions for safe handling	
Handling	Handle in accordance with good industrial hygiene and safety practice. Use only in area provided with appropriate exhaust ventilation. Prevent contact with skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using this product.
Conditions for safe storage, inclu	ding any incompatibilities
Storage:	Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials. Keep out of the reach of children.
Incompatible Products	Strong bases. Metals.
8. E	XPOSURE CONTROLS/PERSONAL PROTECTION
8. E	APOSORE CONTROLS/PERSONAL PROTECTION

# Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Manganese sulfate monohydrate 10034-96-5	TWA: 0.02 mg/m <sup>3</sup> Mn TWA: 0.1 mg/m <sup>3</sup> Mn	(vacated) Ceiling: 5 mg/m <sup>3</sup> Ceiling: 5 mg/m <sup>3</sup> Mn	IDLH: 500 mg/m <sup>3</sup> Mn TWA: 1 mg/m <sup>3</sup> Mn STEL: 3 mg/m <sup>3</sup> Mn

Appropriate engineering controls

# 4167 \*- MANGANOUS SULFATE SOLUTION

Engineering Measures	Showers Eyewash stations Ventilation systems.
Individual protection measures	s, such as personal protective equipment
Eye/Face Protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Gloves & Lab Coat.
Respiratory protection	Use only with adequate ventilation. In case of insufficient ventilation wear suitable respiratory equipment.
Hygiene Measures	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	Clear pink	Odor	None
Property	Values	Remarks • Met	hod
pH	3		
Melting point / freezing point	No information available		
Boiling point / boiling range	No information available		
Flash point	Not Applicable		
Evaporation rate			
Flammability (solid, gas) Flammability Limit in Air	No information available		
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Specific gravity	No information available		
Water solubility	No information available		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		
Other Information			
Softening point	No information available		
Molecular weight	No information available		
VOC Content (%)	No information available		
Density	No information available		
Bulk density	No information available		
	10. STABILITY AND	REACTIVITY	
Stability	Stable under recommended sto	rage conditions.	
Hazardous polymerization	Hazardous polymerization does	not occur.	
Conditions to avoid	Excessive heat.		

Page 4/8

# 4167 \*- MANGANOUS SULFATE SOLUTION

### Incompatible materials

Strong bases. Metals.

Hazardous decomposition products Sulfur oxides (SOx). Manganese oxides.

# **11. TOXICOLOGICAL INFORMATION**

#### Information on likely routes of exposure

### **Component identification**

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Manganese sulfate monohydrate 10034-96-5	= 782 mg/kg (Rat)	Not Established	Not Established

### Information on toxicological effects

Chemical name	ACGIH	IARC	NTP	OSHA
Manganese sulfate monohydrate 10034-96-5	Not Established	Not Established	Not Established	Not Established
Chronic toxicity	Chronic man manganese include slugg inhalation ex	ganese poisoning primaril poisoning can result from o gishness, sleepiness, and y posure can cause lung da	y involves the central nerve excessive inhalation and in weakness in the legs. Kide mage.	ous system. Chronic agestion. Early symptoms ney effects. Chronic

### Numerical measures of toxicity -

ATEmix (oral)

2,172.00 mg/kg

# **12. ECOLOGICAL INFORMATION**

# Ecotoxicity

Toxic to aquatic life with long lasting effects

Unknown Aquatic Toxicity 64 % of the mixture consists of components(s) of unknown hazards to the aquatic environment				
Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)	
Managanaga gulfata manahudrata	Not Established	Not Established	Not Established	

Manganese sulfate monohydrate 10034-96-5	Not Established	Not Established	Not Established

# Persistence and degradability No information available.

### **Bioaccumulation/Accumulation**

No information available.

Chemical name	Log Pow
Manganese sulfate monohydrate	Not Established

# **13. DISPOSAL CONSIDERATIONS**

### **Disposal Methods**

Dispose of waste product or used containers according to local regulations.

**Contaminated packaging** 

Chemical name RCRA RCRA - Basis for Listing RCRA - D Series Wastes RCRA - U Series Wastes Manganese sulfate Not Established Not Established Not Established monohydrate 10034-96-5

Do not reuse empty containers.

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Manganese sulfate monohydrate	Not Established	Not Established	Not Established	Not Established

Page 5/8

# 4167 \*- MANGANOUS SULFATE SOLUTION

10034-96-5 **California Hazardous Waste Status Chemical name** Manganese sulfate monohydrate 10034-96-5 **14. TRANSPORT INFORMATION** DOT Not regulated TDG Not regulated MEX Not regulated ICAO Not regulated Not regulated IATA IMDG/IMO Not regulated Not regulated RID ADR Not regulated ADN Not regulated **15. REGULATORY INFORMATION** International Inventories Complies TSCA DSL/NDSL Does not comply EINECS/ELINCS Does not comply Complies ENCS Complies IECSC Does not comply KECL PICCS Complies AICS Complies

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 AICS - Australian Inventory of Chemical Substances

# **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 sulfate monohydrate 10034-96-5	1.0	
SARA 311/312 Hazard Categories		
Acute health hazard	Yes	
Chronic Health Hazard	Yes	
Fire hazard	No	
Sudden release of pressure hazard	No	
Reactive Hazard	No	

Page 6/8

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)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Manganese sulfate monohydrate 10034-96-5	Not Established	Not Established	Not Established	Not Established

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

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Manganese sulfate monohydrate 10034-96-5	*	Not Established	•

### **US State Regulations**

Chemical name	California Proposition 65	
Manganese sulfate monohydrate 10034-96-5	Not Established	
U.S. State Right-to-Know Regulations		

Chemical name	New Jersey	Massachusetts	Pennsylvania
Manganese sulfate monohydrate 10034-96-5	X	Not Established	X

# CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

	ind.	16. OTHER INFORM	ATION	
NFPA	Health hazard 1	Flammability 0	Instability 0	Physical and Chemical Hazards N/A
Health hazard 2	Flammability 0	Stability 0		
1	>			
Health Hazard	2			
File Hazaid	0			
Reactivity	0			
Prepared by Issuing Date	Regulate Dec-12-	ory Affairs Department 2016		
Reason for revision	MSDS w years of	vas reviewed per Canada the request	request - Canada require	es MSDS to be dated within 3
Disclaimer				

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet



Issuing Date Dec-12-2016

Page 8/8



# Safety Data Sheet

OSHA format Revision Number 0

# 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier	
Product name	Sodium Thiosulfate .025 N
Other means of identificatio	m
Product Code(s)	4169
Recommended use of the c	hemical and restrictions on use
Recommended Use	Use as a laboratory reagent. Laboratory chemicals. Industrial (not for food or food contact use).
Details of the supplier of the	e safety data sheet
	Manufacturer Address
	LaMotte Company, Inc.
	802 Washington Avenue
	P.O. Box 329
	Chestertown, MD 21620 USA
	T 410-778-3100
	F 410-778-9748
Emergency telephone numb	pers
(CHEM-TEL):USA, Canada, F	Juerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

# 2. HAZARDS IDENTIFICATION

# **OSHA Regulatory Status**

This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

### EMERGENCY OVERVIEW

Appearance Colorless

Physical state liquid

Odor None

# **Precautionary Statements - Prevention**

Keep out of the reach of children.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED:. Drink 1 or 2 glasses of water. Call a physician immediately.

#### Storage:

Store in a well-ventilated place. Keep cool.

3. COMPOSITION/INFORMATION ON INGREDIENTS\*

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Page 1/6

	4. FIRST AID MEASURES
First Aid Measures	
General advice	Do not get in eyes, on skin, or on clothing.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.
Skin contact	Wash off with warm water and soap. If skin irritation persists, call a physician.
Inhalation	Not expected. Remove to fresh air.
Ingestion	Drink plenty of water. Consult a physician if necessary.
Self-protection of the first aider	Use personal protection recommended in Section 8. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

IDOT AID MEAGUDE

# 5. FIREFIGHTING MEASURES

Suitable extinguishing media Dry chemical, CO 2, alcohol-resistant foam or water spray.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

All and a strength	6. ACCIDENTAL RELEASE MEASURES	
Personal precautions, protective	e equipment and emergency procedures	
Personal precautions	Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing.	
Environmental precautions	See Section 12 for additional Ecological Information. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.	
Methods and material for contai	nment and cleaning up	
Methods for containment	Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).	
Methods for cleaning up	If local regulations permit, rinse to drain with excess water. After cleaning, flush away traces with water.	
	7. HANDLING AND STORAGE	
Precautions for safe handling		
Handling	Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using this product.	

Conditions for safe storage, including any incompatibilities

Storage:

Keep containers tightly closed in a dry, cool and well-ventilated place. Store at room temperature. Keep away from direct sunlight. Store away from incompatible materials. Keep out of the reach of children.

Page 2/6

**Incompatible Products** 

Acids.

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Appropriate engineering contr	rols
Engineering Measures	Showers Eyewash stations Ventilation systems.
Individual protection measure	s, such as personal protective equipment
Eye/Face Protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Wear protective gloves/clothing.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. 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	Colorless	Odor	None
Property	Values	Remarks • Method	
pH	10		
Melting point / freezing point	No information available		
Boiling point / boiling range	No information available		
Flash point	Not Applicable		
Evaporation rate			
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Specific gravity	No information available		
Water solubility	No information available		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		
Other Information			
Softening point	No information available		
Molecular weight	No information available		
VOC Content (%)	No information available		
Density	No information available		
Bulk density	No information available		
	Page 3	16	

# **10. STABILITY AND REACTIVITY**

Stability Hazardous polymerization	Stable under recommended storage conditions. Hazardous polymerization does not occur.
Conditions to avoid	Excessive heat. Direct sunlight. Incompatible Products.
Incompatible materials	Acids.

Hazardous decomposition products

# **11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure

### **Component identification**

Information on toxicological effects

**12. ECOLOGICAL INFORMATION** 

Ecotoxicity

Persistence and degradability No information available.

Bioaccumulation/Accumulation No information available.

# **13. DISPOSAL CONSIDERATIONS**

Disposal Methods	This material, as supplied, is not a hazardous waste according to state and federal regulations (40 CFR 261). Can be disposed as waste water, when in compliance with local regulations.
Contaminated packaging	Do not reuse empty containers.

# **14. TRANSPORT INFORMATION**

DOT	Not regulated
TDG	Not regulated
MEX	Not regulated
ICAO	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
RID	Not regulated

Page 4/6

# 4169 \*- Sodium Thiosulfate .025 N

ADR	Not regulated
ADN	Not regulated

The second second	15. REGULATORY INFORMATION	1
International Inventories		
TSCA	Complies	
DSL/NDSL	Complies	
EINECS/ELINCS	Complies	
ENCS	Complies	
IECSC	Complies	
KECL	Complies	
PICCS	Complies	
AICS	Complies	

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

AICS - Australian Inventory of Chemical Substances

### **US Federal Regulations**

S

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

ARA 311/312 Hazard Categories	
Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

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)

<u>CERCLA</u> This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

### US State Regulations

This product does not contain any Proposition 65 chemicals. U.S. State Right-to-Know Regulations

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

		16. OTHER INFORM	ATION	
NFPA	Health hazard 1	Flammability 0	Instability 0	Physical and Chemical
HMIS	Health hazard 1	Flammability 0	Stability 0	Hazards N/A

Page 5/6

Issuing Date Dec-12-2016



Prepared by Issuing Date Disclaimer

#### Regulatory Affairs Department Dec-12-2016

Disclaimer The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet

Page 6/6



# Safety Data Sheet

OSHA format vision Number 0

# 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier	
Product name	STARCH INDICATOR SOLUTION
Other means of identificatio	un
Product Code(s)	4170
Recommended use of the cl	hemical and restrictions on use
Recommended Use	Use as a laboratory reagent. Laboratory chemicals. Industrial (not for food or food contact use).
Details of the supplier of the	e safety data sheet
	Manufacturer Address
	LaMotte Company, Inc.
	802 Washington Avenue
	P.O. Box 329
	Chestertown, MD 21620 USA
	T 410-778-3100
	F 410-778-9748
Emergency telephone numb	Ders
(CHEM-TEL):USA, Canada, F	Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

# 2. HAZARDS IDENTIFICATION

### **OSHA Regulatory Status** This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

# EMERGENCY OVERVIEW

Appearance Colorless

Physical state liquid

Odor None

# **Precautionary Statements - Prevention**

Do not handle until all safety precautions have been read and understood. Keep container tightly closed. Keep out of reach of children.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED: Drink 1 or 2 glasses of water. Call a physician immediately.

Storage:

Store in a well-ventilated place. Keep cool.

# 3. COMPOSITION/INFORMATION ON INGREDIENTS\*

Page 1/6

# 4170 \*- STARCH INDICATOR SOLUTION

ken a second	4. FIRST AD MEASURES
First Aid Measures	
General advice	Do not get in eyes, on skin, or on clothing.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If irritation persists or develops, contact a physician.
Skin contact	Wash off with warm water and soap. If skin irritation persists, call a physician.
Inhalation	Not expected.
Ingestion	Drink plenty of water. Do not induce vomiting without medical advice (pH 3). Consult a physician. Never give anything by mouth to an unconscious person.
Self-protection of the first aider	Use personal protective equipment. See section 8 for more information. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
STREET STREET, WITH	5. FIREFIGHTING MEASURES

A FIDET AID MEACUIDES

Suitable extinguishing media Dry chemical, CO 2, alcohol-resistant foam or water spray.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

	6. ACCIDENTAL RELEASE MEASURES
Personal precautions, protectiv	e equipment and emergency procedures
Personal precautions	Use personal protective equipment. See section 8. Avoid contact with eyes, skin and clothing.
Environmental precautions	See Section 12 for additional Ecological Information. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Methods and material for conta	inment and cleaning up
Methods for containment	Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).
Methods for cleaning up	Neutralize spill with alkaline material (sodium bicarbonate), being careful to prevent splattering, then containerize slurry and hold for later disposal. If local regulations permit, dilute slurry with water and rinse to drain with excess water. Keep in suitable and closed containers for disposal. After cleaning, flush away traces with water.
	7. HANDLING AND STORAGE
Precautions for safe handling	
Handling	Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using this product.

Conditions for safe storage, including any incompatibilities

# Page 2/6

Storage:	Keep containers tightly closed in a dry, cool and well-ventilated place. Store at room temperature. Keep away from direct sunlight. Store away from incompatible materials. Keep out of the reach of children.
Incompatible Products	Strong oxidizing agents. Iron Salts.
8.	EXPOSURE CONTROLS/PERSONAL PROTECTION
Control parameters	
Appropriate engineering contro	ols
Engineering Measures	Showers Eyewash stations Ventilation systems.
Individual protection measures	, such as personal protective equipment
Eye/Face Protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Wear protective gloves/clothing.
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. 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	Colorless	Odor	None
Property	Values	Remarks • Meth	od
pH	3		
Melting point / freezing point	No information available		
Boiling point / boiling range	ca. 100 °C / 212 °F		
Flash point	Not Applicable		
Evaporation rate			
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Specific gravity	No information available		
Water solubility	No information available		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		
Other Information			

Page 3/6

# 4170 \*- STARCH INDICATOR SOLUTION

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available
Contraction of the second	10. STABILITY AND REACTIVITY
Stability	Stable under normal conditions of use and storage.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Excessive heat. Incompatible products. Direct sunlight.
incompatible materials	Strong oxidizing agents. Iron Salts.
Hazardous decomposition pro	ducts Carbon monoxide (CO).
	11. TOXICOLOGICAL INFORMATION
information on likely routes of	avposite
internation of intery routes of	
Component identification	
Component identification	forte
Component identification Information on toxicological ef	fects Prolonged skin contact may cause skin irritation and/or dermatitis.
Component identification Information on toxicological ef Chronic toxicity	fects_ Prolonged skin contact may cause skin irritation and/or dermatitis.
Component identification Information on toxicological ef Chronic toxicity Numerical measures of toxicity	fects Prolonged skin contact may cause skin irritation and/or dermatitis.
Component identification Information on toxicological ef Chronic toxicity Numerical measures of toxicity	Fects Prolonged skin contact may cause skin irritation and/or dermatitis.
Component identification Information on toxicological ef Chronic toxicity Numerical measures of toxicity Ecotoxicity Unknown Aquatic Toxicity, 99	fects_ Prolonged skin contact may cause skin irritation and/or dermatitis.  12. ECOLOGICAL INFORMATION 87 % of the mixture consists of components(s) of unknown bazards to the aquatic environment
Component identification Information on toxicological ef Chronic toxicity Numerical measures of toxicity Ecotoxicity Unknown Aquatic Toxicity 99. Persistence and degradability No information available	fects_ Prolonged skin contact may cause skin irritation and/or dermatitis.  12. ECOLOGICAL INFORMATION 87 % of the mixture consists of components(s) of unknown hazards to the aquatic environment
Component identification Information on toxicological ef Chronic toxicity Numerical measures of toxicity Ecotoxicity Unknown Aquatic Toxicity 99. Persistence and degradability No information available. Bioaccumulation/Accumulation	fects_  Prolonged skin contact may cause skin irritation and/or dermatitis.    L  12. ECOLOGICAL INFORMATION    87 % of the mixture consists of components(s) of unknown hazards to the aquatic environment
Component identification Information on toxicological ef Chronic toxicity Numerical measures of toxicity Ecotoxicity Unknown Aquatic Toxicity 99. Persistence and degradability No information available. Bioaccumulation/Accumulation No information available.	fects  Prolonged skin contact may cause skin irritation and/or dermatitis.    /  12. ECOLOGICAL INFORMATION    87 % of the mixture consists of components(s) of unknown hazards to the aquatic environment
Component identification Information on toxicological ef Chronic toxicity Numerical measures of toxicity Ecotoxicity Unknown Aquatic Toxicity 99. Persistence and degradability No information available. Bioaccumulation/Accumulation No information available.	fects  Prolonged skin contact may cause skin irritation and/or dermatitis.    L-  12. ECOLOGICAL INFORMATION    87 % of the mixture consists of components(s) of unknown hazards to the aquatic environment    1    1    13. DISPOSAL CONSIDERATIONS
Component identification Information on toxicological ef Chronic toxicity Numerical measures of toxicity Ecotoxicity Unknown Aquatic Toxicity 99. Persistence and degradability No information available. Bioaccumulation/Accumulation No information available.	fects  Prolonged skin contact may cause skin irritation and/or dermatitis.    L-  12. ECOLOGICAL INFORMATION    87 % of the mixture consists of components(s) of unknown hazards to the aquatic environment    10    13. DISPOSAL CONSIDERATIONS    Dispose according to federal, state, and local regulations. If permitted, neutralize reagen with sodium bicarbonate/sodium carbonate, add slurry to large volume of water to dilute, rinse to drain with excess water.

# 14. TRANSPORT INFORMATION

DOT	Not regulated
TDG	Not regulated
MEX	Not regulated

Page 4/6

# 4170 \*- STARCH INDICATOR SOLUTION

ICAO	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
RID	Not regulated
ADR	Not regulated
ADN	Not regulated

# **15. REGULATORY INFORMATION**

International inventories	
TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

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 AICS - Australian Inventory of Chemical Substances

# **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

SARA 311/312 Hazard Categories	
Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

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**

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations



**16. OTHER INFORMATION** NFPA Health hazard 0 Flammability 0 Instability 0 **Physical and Chemical** Hazards N/A 0 Health Hazard 1 Fire Hazard 0 Reactivity 0 Regulatory Affairs Department Jan-31-2017 Prepared by **Issuing Date** Disclaimer

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet

Page 6/6



# Safety Data Sheet

**Revision Number 1** 

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Revision Date Dec-15-2016

Product identifier	
Product name	IRON REAGENT 1
Other means of identificatio	on and a second s
Product Code(s)	4450
UN-No	2796
Recommended use of the cl	hemical and restrictions on use
Recommended Use	Use as a laboratory reagent. Laboratory chemicals. Industrial (not for food or food contact use).
Details of the supplier of the	e safety data sheet
	Manufacturer Address
	LaMotte Company, Inc.
	802 Washington Avenue

P.O. Box 329 Chestertown, MD 21620 USA T 410-778-3100 F 410-778-9748

Emergency telephone numbers (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

Page 1/8

# 2. HAZARDS IDENTIFICATION

Skin corrosion/irritation	Category 1	
Serious eye damage/eye irritation	Category 1	

### EMERGENCY OVERVIEW

DANGER

Hazard statements

Causes severe skin burns and eye damage.



Appearance Clear, colorless

Physical state liquid

Odor Odorless

Precautionary Statements - Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not taste or swallow. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling.

### Response: Immediately call a poison center or physician.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED:. Rinse mouth. Do NOT induce vomiting.

Storage: Store locked up.

Disposal: Dispose of contents/container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS*		DIENTS*
Chemical name	CAS No.	Weight-%
Sulfuric acid	7664-93-9	4.8

# 4. FIRST AID MEASURES **First Aid Measures** General advice Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately. Wash off immediately with soap and plenty of water for at least 15 minutes. Take off Skin contact contaminated clothing and wash before reuse. Call a physician immediately.

Page 2/8

Inhalation	Remove to fresh air. If symptoms persist, call a physician.		
Ingestion Do NOT induce vomiting. Drink plenty of water. Call a physician immediate anything by mouth to an unconscious person.			
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. Use personal protection recommended in Section 8.		
	5. FIREFIGHTING MEASURES		
Suitable extinguishing media			
Jry chemical or CO <sub>2</sub> , DO NOT US	E WATER.		
Specific hazards arising from the React vigorously with water.	e chemical		
Hazardous combustion products			
Contact with metals may evolve fla	mmable hydrogen gas.		
Protective equipment and precau	utions for firefighters		
As in any fire, wear self-contained I protective gear.	preathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full		
	6. ACCIDENTAL RELEASE MEASURES		
Personal precautions, protective	equipment and emergency procedures		
Personal precautions Ensure adequate ventilation. Avoid contact with skin, eyes, and inhalation of personal protective equipment. See section 8.			
Environmental precautions	See Section 12 for additional Ecological Information. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.		
Methods and material for contain	ment and cleaning up		

Methods for containmentContain and collect spillage with non-combustible absorbent material, (e.g. sand, earth,<br/>diatomaceous earth, vermiculite) and place in container for disposal according to local /<br/>national regulations (see Section 13).Methods for cleaning upNeutralize spill with alkaline material (sodium bicarbonate), being careful to prevent<br/>splattering, then containerize slurry and hold for later disposal. If local regulations permit,<br/>dilute slurry with water and rinse to drain with excess water. After cleaning, flush away<br/>traces with water.

# 7. HANDLING AND STORAGE

# Precautions for safe handling

Handling	Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using this product.
Conditions for safe storage, i	ncluding any incompatibilities
Storage:	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from incompatible materials such as cyanides or sulfides. Store away from strong bases or metals. Do not store near combustible materials. Keep out of the reach of children.
Incompatible Products	Water. Strong bases. Metals. Combustible materials. Cyanides. Sulfides. Formaldehyde.

Page 3/8

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

# Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m <sup>3</sup> thoracic fraction	TWA: 1 mg/m <sup>3</sup> (vacated) TWA: 1 mg/m <sup>3</sup>	IDLH: 15 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>
Appropriate engineering control	ols		
Engineering Measures	Ensure adequate ventilation, esp	becially in confined areas.	
Individual protection measures	s, such as personal protective equip	ment	
Eye/Face Protection	Wear safety glasses with side shields (or goggles).		
Skin and body protection	Wear protective gloves/clothing.		
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.		
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. 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	Clear, colorless	Odor	Odorless
Property	Values	Remarks • Meth	hod
pH	1		
Melting point / freezing point	No information available		
Flash point	Not Applicable		
Evaporation rate			
Flammability (solid, gas) Flammability Limit in Air	No information available		
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Specific gravity	No information available		
Water solubility	No information available		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		
Other Information			
Softening point	No information available		
Molecular weight	No information available		
VOC Content (%)	No information available		
Density	No information available		
Bulk density	No information available		
	Page 41	8	
	i age 47		

OSHA Not Established

# **10. STABILITY AND REACTIVITY**

Stability Hazardous Reactions	Stable under normal conditions of use and storage. Reacts violently with water. Contact with metals may evolve flammable hydrogen gas.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Excessive heat. Incompatible products. Direct sunlight.
Incompatible materials	Water. Strong bases. Metals. Combustible materials. Cyanides. Sulfides. Formaldehyde.

Hazardous decomposition products Hydrogen gas. Sulfur oxides (SOx).

. .. .

# **11. TOXICOLOGICAL INFORMATION**

# Information on likely routes of exposure

Component identification	and the second second second			
Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50	
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	Not Established	= 510 mg/m <sup>3</sup> (Rat) 2 h	

Information on toxicol	ogical effects		
Chemical name	ACGIH	IARC	NTP
Sulfuric acid 7664-93-9	Not Established	Group 1	Known

A2 - Suspected Human Carcinogen

. . . . .

Group 1 - Carcinogenic to Humans

Known - Known Carcinogen

X - Present **Chronic toxicity** 

...

Chronic exposure to corrosive mists or vapors may cause erosion of the teeth. Chronic exposure to mists containing sulfuric acid is a cancer hazard.

ATEmix (oral)

44,583.00 mg/kg

# **12. ECOLOGICAL INFORMATION**

Ecotoxicity

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Sulfuric acid	Not Established	500: 96 h Brachydanio rerio mg/L	29: 24 h Daphnia magna mg/L
7664-93-9		LC50 static	EC50

### Persistence and degradability

No information available.

Bioaccumulation/Accumulation When released into the soil, this material may leach into ground water. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet or dry deposition.

Chemical name	Log Pow	
Sulfuric acid 7664-93-9	Not Established	

# **13. DISPOSAL CONSIDERATIONS**

**Disposal Methods** 

Dispose according to federal, state, and local regulations. If permitted, neutralize reagent

Page 5/8

with sodium bicarbonate/sodium carbonate, add slurry to large volume of water to dilute, rinse to drain with excess water.

Contaminated packaging

Do not reuse empty containers.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Sulfuric acid 7664-93-9	Not Established	-	Not Established	Not Established
Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Sulfuric acid 7664-93-9	Not Established	Not Established	Not Established	Not Established
	Chemical name		California Hazardous W	aste Status
	Sulfuric acid 7664-93-9		Toxic Corrosive	

# 14. TRANSPORT INFORMATION

DOT	
Proper shipping name	SULPHURIC ACID
UN-No	2796
Hazard Class	8
Packing group	11
Reportable Quantity (RQ)	1000
TDG	Not regulated
MEX	Not regulated
ICAO	Not regulated
IATA	
UN-No	2796
Proper shipping name	SULPHURIC ACID (<51% ACID)
Hazard Class	8
Packing group	11
IMDG/IMO	
UN-No	2796
Proper shipping name	SULPHURIC ACID (<51% ACID)
Hazard Class	8
Packing group	
RID	
UN-No	2796
Proper shipping name	SULPHURIC ACID (<51% ACID)
Hazard Class	8
Packing group	
ADR	
UN-No	2796
Proper shipping name	SULPHURIC ACID (<51% ACID)
Hazard Class	8
Packing group	Ш
ADN	Not regulated
	15. REGULATORY INFORMATION
International Inventories	

Page 6/8

# 4450 \*- IRON REAGENT 1

ssuing	Date
Mar-23-	2015

TOOA	Complian
ISCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

### 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 AICS - Australian Inventory of Chemical Substances

**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 %
Sulfuric acid 7664-93-9	1.0
SARA 311/312 Hazard Categories	
Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	Yes

# 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
Sulfuric acid 7664-93-9	1000 lb	Not Established	Not Established	×

CERCLA This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Sulfuric acid 7664-93-9	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ

### **US State Regulations**

California Proposition 65 has classified "strong inorganic acid mists containing sulfuric acid" as a chemical known to the State of California to cause cancer. This classification applies only to occupational exposures to these mists generated during manufacturing processes which sulfuric acid is used or produced.

Carcinogen

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sulfuric acid	X	X	X

# 4450 \*- IRON REAGENT 1

# CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

	Chemical name	CF	SC (Consumer Product Safety Subst	Commission) - Specially Regulated tances
Sulfuric acid 7664-93-9			Add POISON to label, 16 CFR 1500.129	
		16. OTHER INFO	RMATION	
NFPA	Health hazard 3	Flammability 0	Instability 0	Physical and Chemical Hazards W
3 3	)	Stability		
Health Hazard File Hazard Reactivity	3 0 1			
Prepared by Issuing Date	Regulato Mar-23-2	ory Affairs Department 2015		
Revision Date Reason for revision Disclaimer	Dec-15-2 New GH	2016 S format		

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet

Page 8/8



# Safety Data Sheet

**OSHA** format **Revision Number** 0

Issuing Date Feb-16-2017

Revision Date Dec-15-2016

# 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product identifier** Product name **IRON REAGENT 2 POWDER** Other means of identification Product Code(s) 4451 UN-No 3260 
 Recommended use of the chemical and restrictions on use

 Recommended Use
 Use as a laboratory reagent. Industrial (not for food or food contact use). Laboratory
chemicals. Details of the supplier of the safety data sheet Manufacturer Address

LaMotte Company, Inc. 802 Washington Avenue P.O. Box 329 Chestertown, MD 21620 USA T 410-778-3100 F 410-778-9748

Emergency telephone numbers (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

Page 1/9

2. HAZARDS IDENTIFICATION

Acute toxicity - Oral	Category 4	
Acute toxicity - Dermal	Category 4	
Serious eye damage/eye irritation	Category 1	

EMERGENCY OVERVIEW		
DANGER		
Hazard statements Harmful if swallowed. Harmful in co	ntact with skin. Causes serious eye damage.	
Appearance Gray	Physical state powder	Odor Slight Sulphurous

### Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or physician.

IF ON SKIN: Wash with plenty of soap and water. Call a poison center or doctor/physician if you feel unwell. Wash contaminated clothing before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

#### Storage:

Store in a well-ventilated place. Keep cool.

Dispose of contents/container to an approved waste disposal plant.

#### Other Hazards

Toxic to aquatic life with long lasting effects.

# 3. COMPOSITION/INFORMATION ON INGREDIENTS\*

Formula	*Proprietan	denotes trade secret	
Chemic	al name	CAS No.	Weight-%
Zii	nc	*_	2
Sodium	sulfite	7757-83-7	3
2,2`-Bip	yridine	366-18-7	8
Sodium me	tabisulfite*	7681-57-4	87

LaMotte Company proprietary formulation under the State of New Jersey Trade Secret Protection Law, assigned the NJTSRN 80100291-5074p, and may be disclosed only in a medical emergency

# 4. FIRST AID MEASURES

First Aid Measures

# Page 2/9

Do not get in eyes, on skin, or on clothing. Show this safety data sheet to the doctor in attendance.
Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.
Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. Consult a physician if necessary.
Remove to fresh air. If symptoms arise, call a physician.
Drink plenty of water. Rinse mouth. Consult a physician if necessary.
Use personal protection recommended in Section 8. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

# 5. FIREFIGHTING MEASURES

#### Suitable extinguishing media

Water spray, dry chemical, carbon dioxide (CO 2), or foam.

#### Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

# 6. ACCIDENTAL RELEASE MEASURES Personal precautions, protective equipment and emergency procedures Personal precautions See section 8. See Section 12 for additional Ecological Information. Beware of vapors accumulating to **Environmental precautions** form explosive concentrations. Vapors can accumulate in low areas. Methods and material for containment and cleaning up Sweep up in a manner that does not dispurse dust and shovel into suitable containers for Methods for containment disposal. Dispose according to federal, state, and local regulations. Use personal protective equipment. Avoid dust formation. After cleaning, flush away traces Methods for cleaning up with water. 7. HANDLING AND STORAGE Precautions for safe handling Handling Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage:	Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials. Keep out of the reach of children.
Incompatible Products	Acids. Alkalis. Strong oxidizing agents.

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Page 3/9

# 4451 \*- IRON REAGENT 2 POWDER

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Zinc	*	*-	Not Established
Sodium sulfite 7757-83-7	•-	*	Not Established
2,2°-Bipyridine 366-18-7	*-	*	Not Established
Sodium metabisulfite* 7681-57-4	TWA: 5 mg/m <sup>3</sup>	(vacated) TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>

Appropriate engineering controls

Engineering Measures

Showers Eyewash stations Ventilation systems.

# Individual protection measures, such as personal protective equipment

Eye/Face Protection	Wear safety glasses with side shields (or goggles). Goggles.
Skin and body protection	Wear protective gloves/clothing.
Respiratory protection	Maintain adequate ventilation.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

# Information on basic physical and chemical properties

Physical state	powder		
Appearance	Gray	Odor	Slight Sulphurous
Property	Values	Remarks • Met	hod
pH	6	(0.1g/10mL wate	er)
Melting point / freezing point	No information available		
Boiling point / boiling range	No information available		
Flash point	Not Applicable		
Evaporation rate			
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Specific gravity	No information available		
Water solubility	Soluble in water		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		
Other Information			
Softening point	No information available		
Molecular weight	No information available		
	Page 4/9		

Issuing Date Feb-16-2017

VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

**10. STABILITY AND REACTIVITY** 

Stability	Stable under normal conditions of use and storage. Stability decreases in the presence of moisture.
Hazardous Reactions	None under normal processing.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Excessive heat. Exposure to air or moisture over prolonged periods. Keep away from children.
Incompatible materials	Acids. Alkalis. Strong oxidizing agents.

Hazardous decomposition products Carbon oxides (COx). Sulfur oxides (SOx). Sodium oxides.

# **11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure

### **Component identification**

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Zinc	Not Established	Not Established	Not Established
Sodium sulfite 7757-83-7	= 820 mg/kg (Rat)	Not Established	> 22 mg/L (Rat)1 h
2,2`-Bipyridine 366-18-7	= 100 mg/kg (Rat)	= 250 mg/kg (Rat)	Not Established
Sodium metabisulfite* 7681-57-4	= 1310 mg/kg (Rat)	> 2 g/kg (Rat)	Not Established

# Information on toxicological effects

Chemical name	ACGIH	IARC	NTP	OSHA
Zinc	Not Established	Not Established	Not Established	Not Established
Sodium sulfite 7757-83-7	Not Established	Group 3	Not Established	Not Established
2,2'-Bipyridine 366-18-7	Not Established	Not Established	Not Established	Not Established
Sodium metabisulfite* 7681-57-4	Not Established	Group 3	Not Established	Not Established

Group 3 - Not classifiable as to its carcinogenicity to humans

ATEmix (oral) ATEmix (dermal)

671.00 mg/kg 1,328.00 mg/kg

# **12. ECOLOGICAL INFORMATION**

Ecotoxicity Toxic to aquatic life with long lasting effects

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Zinc	0.09 - 0.125: 72 h Pseudokirchneriella subcapitata mg/L EC50 static 0.11 - 0.271: 96 h Pseudokirchneriella subcapitata mg/L EC50 static	0.211 - 0.269: 96 h Pimephales promelas mg/L LC50 semi-static 2.16 - 3.05: 96 h Pimephales promelas mg/L LC50 flow-through 0.24: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.41: 96 h Oncorhynchus mykiss mg/L	0.139 - 0.908: 48 h Daphnia magna mg/L EC50 Static

Page 5/9
		LC50 static 0.45: 96 h Cyprinus carpio mg/L LC50 semi-static 0.59: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 2.66: 96 h Pimephales promelas mg/L LC50 static 3.5: 96 h Lepomis macrochirus mg/L LC50 static 30: 96 h Cyprinus carpio mg/L LC50 7.8: 96 h Cyprinus carpio mg/L LC50 static	
Sodium sulfite 7757-83-7	Not Established	220 - 460: 96 h Leuciscus idus mg/L LC50 static	330: 24 h Psammechinus miliaris mg/L LC50
2,2`-Bipyridine 366-18-7	Not Established	Not Established	Not Established
Sodium metabisulfite* 7681-57-4	40: 96 h Desmodesmus subspicatus mg/L EC50 48: 72 h Desmodesmus subspicatus mg/L EC50	32: 96 h Lepomis macrochirus mg/L LC50 static	89: 24 h Daphnia magna Straus mg/L EC50

#### Persistence and degradability No information available.

### Bloaccumulation/Accumulation For .? :.

Chemical name	Log Pow
Zinc	Not Established
Sodium sulfite 7757-83-7	-4
2,2'-Bipyridine 366-18-7	Not Established
Sodium metabisulfite* 7681-57-4	-3.7

### 13. DISPOSAL CONSIDERATIONS

**Disposal Methods** 

Dispose of contents/containers in accordance with local regulations. This material, as supplied, is not a hazardous waste according to state and Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste pursuant to Federal regulations, and the applicable state requirements for the specific area of disposal. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging

Do not reuse empty containers.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Zinc	Not Established		Not Established	Not Established
Sodium sulfite 7757-83-7	Not Established		Not Established	Not Established
2,2`-Bipyridine 366-18-7	Not Established		Not Established	Not Established
Sodium metabisulfite*	Not Established	-	Not Established	Not Established

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Zinc	Not Established	Not Established	Not Established	Not Established
Sodium sulfite 7757-83-7	Not Established	Not Established	Not Established	Not Established
2,2°-Bipyridine	Not Established	Not Established	Not Established	Not Established

Page 6/9

# 4451 \*- IRON REAGENT 2 POWDER

Issuing Date Feb-16-2017

366-18-7				
Sodium metabisulfite* 7681-57-4	Not Established	Not Established	Not Established	Not Established
CI	hemical name		California Hazardous Wa	aste Status
	Zinc	Ignitable powder Toxic		oxic
Sodium sulfite 7757-83-7			*-	
2,2'-Bipyridine 366-18-7				
Sodium metabisulfite* 7681-57-4			*.	

# 14. TRANSPORT INFORMATION

DOT	
Proper shipping name	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (SODIUM DISULPHITE)
UN-No	3260
Hazard Class	8
Packing group	III
TDG	Not regulated
MEX	Not regulated
ICAO	Not regulated
IATA	
UN-No	3260
Proper shipping name	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (SODIUM DISULPHITE)
Hazard Class	8
Packing group	III
IMDG/IMO	
UN-No	3260
Proper shipping name	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Sodium disulphite)
Hazard Class	8
Packing group	III
RID	
UN-No	3260
Proper shipping name	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (SODIUM DISULPHITE)
Hazard Class	8
Packing group	III
ADR	
UN-No	3260
Proper shipping name	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (SODIUM DISULPHITE)
Hazard Class	8
Packing group	III
ADN	Not regulated
	15. REGULATORY INFORMATION
International Inventories	
TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
ECSC KEOL	Complies
RECL	Complies
	Page 7/9

Issuing Date Feb-16-2017

PICCS		
AICS		

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

Complies Complies

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

AICS - Australian Inventory of Chemical Substances

#### **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 %
Zinc	1.0
Sodium sulfite 7757-83-7	Not Established
2,2'-Bipyridine 366-18-7	Not Established
Sodium metabisulfite* 7681-57-4	Not Established
SARA 311/312 Hazard Categories	
Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	Yes

#### **CWA (Clean Water Act)**

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Zinc	Not Established	x	x	Not Established
Sodium sulfite 7757-83-7	Not Established	Not Established	Not Established	Not Established
2,2`-Bipyridine 366-18-7	Not Established	Not Established	Not Established	Not Established
Sodium metabisulfite* 7681-57-4	Not Established	Not Established	Not Established	Not Established

CERCLA This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Zinc	1000 lb	Not Established	RQ 454 kg final RQ RQ 1000 lb final RQ
Sodium sulfite 7757-83-7		Not Established	
2,2'-Bipyridine 366-18-7	•	Not Established	-
Sodium metabisulfite* 7681-57-4	*.	Not Established	-

US State Regulations

Chemical name	California Proposition 65
Zinc	Not Established



## 4451 \*- IRON REAGENT 2 POWDER

Sodium sulfite 7757-83-7	Not Established
2,2'-Bipyridine 366-18-7	Not Established
Sodium metabisulfite* 7681-57-4	Not Established

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Zinc	X	X	X
Sodium sulfite 7757-83-7	Not Established	Not Established	Not Established
2,2`-Bipyridine 366-18-7	Not Established	Not Established	Not Established
Sodium metabisulfite* 7681-57-4	X	X	X

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

16. OTHER INFORMATION				
NFPA	Health hazard 2	Flammability 0	Instability 0	Physical and Chemical Hazards N/A
Health hazard 2	Stability 1			
2				
Health Hazard	2			
Fire Hazard	.0			
Reactivity	1			
Prepared by Issuing Date Revision Date Reason for revision	Regula Feb-16 Dec-15 SDS se	tory Affairs Department -2017 -2016 ections updated 4		
Disclaimer The information provid The information given and is not to be consid and may not be valid for	ed on this SDS is corrective is designed only as a guiltered as a warranty or quitered as a warranty or quitered as a warranty or quitered in the set of t	t to the best of our knowled ide for safe handling, use, p ality specification. The info combination with any other	ge, information and belie processing, storage, trans prmation relates only to the material or in any proces	f at the date of its publication. sportation, disposal and release specific material designated s, unless specified in the text.

End of Safety Data Sheet

Page 9/9



# **Safety Data Sheet**

OSHA format **Revision Number** 0

# 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier	FERROUS IRON REAGENT	FERROUS IRON REAGENT		
Floudet name				
***				
Other means of identificatio	<u>n</u>			
Product Code(s)	4453			
Recommended use of the cl	nemical and restrictions on use			
Recommended Use	Use as a laboratory reagent. I	Use as a laboratory reagent. Laboratory chemicals. Industrial (not for food or food contact		
	use).			
Details of the supplier of the	safety data sheet			
becaus of the supplier of the	Manufacturer Address			
	LaMotte Company, Inc.			
	802 Washington Avenue			
	P.O. Box 329			
	Chestertown, MD 21620 USA			
	T 410-778-3100	T 410-778-3100		
	F 410-778-9748			
Emergency telephone numb 24 Hour Emergency Number ( collect) 813-248-0585	<u>er</u> CHEM-TEL):USA, Canada, Puerto Rico	1-800-255-3924 Outside North American Continent (Call		
	2. HAZARDS IDEN	TIFICATION		
Acute toxicity - Oral		Category 4		
	EMERGENCY	VEDVIEW		
WARNING	EMERGENCIO			
Hazard statements				
Harmful if swallowed.				



Appearance White Off-white

Physical state powder

**Odor** Odorless

#### **Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Keep out of the reach of children.

#### **Precautionary Statements - Response**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

### Precautionary Statements - Storage



## 4453 - FERROUS IRON REAGENT

Store in a well-ventilated place. Keep cool.

#### **Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant.

#### Other Hazards

May be harmful in contact with skin Harmful to aquatic life with long lasting effects

# 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
2,2'-Bipyridine	366-18-7	8
Potassium chloride	7447-40-7	92

4. FIRST AID MEASURES			
First Aid Measures			
General advice	Do not get in eyes, on skin, or on clothing.		
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.		
Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. Consult a physician if necessary.		
Inhalation	Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and contact emergency personnel.		
Ingestion	Induce vomiting, but only if victim is fully conscious. Clean mouth with water. Call a physician or poison control center immediately.		
Self-protection of the first aider	Use personal protection recommended in Section 8. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.		

#### 5. FIREFIGHTING MEASURES

#### Suitable extinguishing media

Water spray, dry chemical, carbon dioxide (CO 2), or foam.

#### Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protection recommended in Section 8. Avoid dust formation.

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment

Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local /

Page 2/7

	national regulations (see Section 13).		
Methods for cleaning up	Avoid dust formation. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water.		
	7. HANDLING AND STORAGE		
Precautions for safe handling			
Handling	Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using this product.		
Conditions for safe storage, in	ncluding any incompatibilities		
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.		
Incompatible Products	None known based on information supplied.		

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
2,2`-Bipyridine 366-18-7	-	-	Not Established
Potassium chloride 7447-40-7	•		Not Established

### Appropriate engineering controls

Engineering Measures	Showers Eyewash stations Ventilation systems.
Individual protection measures	s, such as personal protective equipment
Eye/Face Protection	Wear safety glasses with side shields (or goggles). Avoid contact with eyes.
Skin and body protection	Gloves & Lab Coat.
Respiratory protection	None required under normal usage.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and at the end of workday.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Physical state Appearance	powder White Off-white	Odor	Odorless
Property	Values	Remarks • Method	
pH Melting point / freezing point Boiling point / boiling range Flash point	7 No information available No information available Not Applicable	(0.1g/10mL water)	
Flammability (solid, gas)	No information available		

Page 3/7

	10. STABILITY AND REACTIVITY	-
Bulk density	No information available	
Density	No information available	
VOC Content (%)	No information available	
Molecular weight	No information available	
Softening point	No information available	
Other Information		
Oxidizing properties	No information available	
Explosive properties	No information available	
Dynamic viscosity	No information available	
Kinematic viscosity	No information available	
Decomposition temperature	No information available	
Autoignition temperature	No information available	
Partition coefficient	No information available	
Solubility in other solvents	No information available	
Water solubility	Soluble in water	
Specific gravity	No information available	
Vapor density	No information available	
Vapor pressure	No information available	
Lower flammability limit:	No information available	
Upper flammability limit:	No information available	
Flammability Limit in Air		

Stability	Stable.
Hazardous Reactions	None under normal processing.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Exposure to air or moisture over prolonged periods
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known.

# **11. TOXICOLOGICAL INFORMATION**

#### Information on likely routes of exposure

#### **Component identification**

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
2,2`-Bipyridine 366-18-7	= 100 mg/kg ( Rat )***	= 250 mg/kg (Rat)***	Not Established
Potassium chloride 7447-40-7	= 2600 mg/kg (Rat)***	Not Established	Not Established

nformation on toxicological effects				
Chemical name	ACGIH	IARC	NTP	OSHA
2,2'-Bipyridine 366-18-7	Not Established	Not Established	Not Established	Not Established
Potassium chloride 7447-40-7	Not Established	Not Established	Not Established	Not Established

ATEmix (oral) ATEmix (dermal) 881.00 mg/kg 3,205.00 mg/kg

# 12. ECOLOGICAL INFORMATION

otoxicity			
Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
2,2°-Bipyridine 366-18-7	Not Established	Not Established	Not Established

Page 4/7

# 4453 - FERROUS IRON REAGENT

Potassium chloride 7447-40-7	2500: 72 h Desmodesmus subspicatus mg/L EC50***	750 - 1020: 96 h Pimephales promelas mg/L LC50 static 1060: 96 h Lepomis macrochirus mg/L LC50 static***	825: 48 h Daphnia magna mg/L EC50 83: 48 h Daphnia magna mg/L EC50 Static***
---------------------------------	--	---	--

Persistence and degradability No information available.

# Bioaccumulation/Accumulation No information available.

Chemical name	Log Pow
2,2'-Bipyridine 366-18-7	Not Established
Potassium chloride 7447-40-7	Not Established

# **13. DISPOSAL CONSIDERATIONS**

**Disposal Methods** 

Dispose of waste product or used containers according to local regulations.

Contaminated packaging

Dispose of waste product or used containers according to local regulations.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	<b>RCRA - U Series Wastes</b>
2,2`-Bipyridine 366-18-7	Not Established	-	Not Established	Not Established
Potassium chloride 7447-40-7	Not Established	-	Not Established	Not Established
Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Chemical name 2,2'-Bipyridine 366-18-7	RCRA - Halogenated Organic Compounds Not Established	RCRA - P Series Wastes Not Established	RCRA - F Series Wastes Not Established	RCRA - K Series Wastes Not Established

Chemical name	California Hazardous Waste Status
2,2`-Bipyridine 366-18-7	•
Potassium chloride 7447-40-7	

# **14. TRANSPORT INFORMATION**

DOT

Not regulated

IATA Not regulated IMDG/IMO Not regulated

# **15. REGULATORY INFORMATION**

International Inventories TSCA DSL/NDSL EINECS/ELINCS ENCS

Complies Complies Complies Complies

Page 5/7

IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

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 AICS - Australian Inventory of Chemical Substances

#### 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 %
2,2'-Bipyridine 366-18-7	Not Established
Potassium chloride 7447-40-7	Not Established
SARA 311/312 Hazard Categories	
Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

#### 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)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
2,2`-Bipyridine 366-18-7	Not Established	Not Established	Not Established	Not Established
Potassium chloride 7447-40-7	Not Established	Not Established	Not Established	Not Established

#### 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

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
2,2`-Bipyridine 366-18-7	-	Not Established	
Potassium chloride 7447-40-7	-	Not Established	

# US State Regulations

#### California Proposition 65

Chemical name	California Proposition 65
2,2'-Bipyridine 366-18-7	Not Established
Potassium chloride 7447-40-7	Not Established

U.S. State Right-to-Know Regulations

## 4453 - FERROUS IRON REAGENT

Chemical name	New Jersey	Massachusetts	Pennsylvania
2,2`-Bipyridine 366-18-7	Not Established	Not Established	Not Established
Potassium chloride 7447-40-7	Not Established	Not Established	Not Established

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

16. OTHER INFORMATION				
NFPA	Health hazard 1	Flammability 0	Instability 0	Physical and Chemical Hazards N/A
HMIS	Health hazard 2	Flammability 0	Stability 0	
Health Hazard	2			
Fire Hazard	0			
Reactivity	0			
Prepared by Issuing Date Disclaimer	Regulat Nov-11-	ory Affairs Department 2015		

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet

Page 7/7



Safety Data Sheet

**Revision Number** 0

Revision Date Dec-13-2016

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier	
Product name	Alkalinity Titration B
Other means of identificatio	n
Product Code(s)	4493
Recommended use of the cl	hemical and restrictions on use
Recommended Use	Use as a laboratory reagent. Laboratory chemicals. Industrial (not for food or food contact use).
Details of the supplier of the	e safety data sheet
	Manufacturer Address
	LaMotte Company, Inc.
	802 Washington Avenue
	P.O. Box 329
	Chestertown, MD 21620 USA

T 410-778-3100 F 410-778-9748

Emergency telephone numbers (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

Page 1/8

2. HAZARDS IDENTIFICATION

Skin corrosion/irritation	Category 1	
Serious eye damage/eye irritation	Category 1	

EMERGENCY OVERVIEW

# DANGER

Hazard statements Causes severe skin burns and eye damage.



Appearance Clear, colorless

Physical state liquid

**Odor** Odorless

#### **Precautionary Statements - Prevention**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not taste or swallow. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling.

#### Response: Immediately call a poison center or physician.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED:. Rinse mouth. Do NOT induce vomiting.

Storage: Store locked up. **Disposal:** Dispose of contents/container to an approved waste disposal plant.

3. COMPOSIT	3. COMPOSITION/INFORMATION ON INGREDIENTS*			
Chemical name	CAS No.	Weight-%		
Sulfuric acid	7664-93-9	0.1		

### 4. FIRST AID MEASURES

First Aid Measures	
General advice	Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray.
Eye contact	Immediately flush eyes with gentle stream of water for at least 15 minutes, occasionally lifting upper and lower eyelids. Call a physician immediately.
Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. If symptoms persist, call a physician. Excess acid on skin can be neutralized with a 2% solution of sodium bicarbonate in water.

Page 2/8

Inhalation	Remove to fresh air. If breathing is difficult, give oxygen.
Ingestion	Do NOT induce vomiting. Drink plenty of water. Call a physician immediately.
Self-protection of the first aider	Use personal protective equipment. See section 8 for more information. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

## **5. FIREFIGHTING MEASURES**

Suitable extinguishing media Dry chemical or CO<sub>2</sub>. DO NOT USE WATER.

Specific hazards arising from the chemical Contact with most metals causes the formation of explosive and flammable hydrogen gas. React vigorously with water.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Personal precautions, protectiv	e equipment and emergency procedures
Personal precautions	Ensure adequate ventilation. Avoid contact with skin, eyes, and inhalation of vapors. Use personal protective equipment. See section 8.
Environmental precautions	See Section 12 for additional Ecological Information. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Methods and material for conta	inment and cleaning up
Methods for containment	Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).
Methods for cleaning up	Neutralize spill with alkaline material (sodium bicarbonate), being careful to prevent splattering, then containerize slurry and hold for later disposal. If local regulations permit dilute slurry with water and rinse to drain with excess water. After cleaning, flush away traces with water.
	7. HANDLING AND STORAGE

# Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using Handling this product.

Conditions for safe storage, including any incompatibilities

Storage:	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from incompatible materials such as cyanides or sulfides. Store away from strong bases or metals. Do not store near combustible materials. Keep out of the reach of children.
Incompatible Products	Water, Strong bases, Metals, Combustible materials, Cyanides, Sulfides, Formaldehyde,

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Page 3/8

Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m <sup>3</sup> thoracic fraction	TWA: 1 mg/m <sup>3</sup> (vacated) TWA: 1 mg/m <sup>3</sup>	IDLH: 15 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>
Appropriate engineering control	ols		
Engineering Measures	Ensure adequate ventilation, especially in confined areas.		
Individual protection measures	s, such as personal protective equip	ment	
Eye/Face Protection	Wear safety glasses with side shields (or goggles).		
Skin and body protection	Wear protective gloves/clothing.		
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.		
Hygiene Measures	Handle in accordance with good smoke when using this product. the product. Take off contaminat	industrial hygiene and safety p Wash hands before breaks and ed clothing and wash before re	practice. Do not eat, drink or d immediately after handling puse.
	9. PHYSICAL AND CHEMIC	AL PROPERTIES	

# Information on basic physical and chemical properties

Physical state	liquid		
Appearance	Clear, colorless	Odor	Odorless
Property	Values	Remarks • Met	hod
pH	1		
Melting point / freezing point	No information available		
Boiling point / boiling range	No information available		
Flash point	Not Applicable		
Evaporation rate			
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Specific gravity	No information available		
Water solubility	No information available		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		
Other Information			
Softening point	No information available		
Molecular weight	No information available		
VOC Content (%)	No information available		
Density	No information available		
Bulk density	No information available		
	10. STABILITY AND	REACTIVITY	
		and the second se	

Page 4/8

Stability Hazardous Reactions	Stable under normal conditions of use and storage. Reacts violently with water. Contact with metals may evolve flammable hydrogen gas.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Excessive heat. Incompatible products. Direct sunlight.
Incompatible materials	Water. Strong bases. Metals. Combustible materials. Cyanides. Sulfides. Formaldehyde.

Hazardous decomposition products Hydrogen gas. Sulfur oxides (SOx).

# **11. TOXICOLOGICAL INFORMATION**

#### Information on likely routes of exposure

Component identification				
Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50	
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	Not Established	= 510 mg/m <sup>3</sup> (Rat) 2 h	

# Information on toxicological effects

Chemical name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	Not Established	Group 1	Known	Not Established

A2 - Suspected Human Carcinogen

Group 1 - Carcinogenic to Humans

Known - Known Carcinogen

X - Present

### **12. ECOLOGICAL INFORMATION**

#### Ecotoxicity

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Sulfuric acid	Not Established	500: 96 h Brachydanio rerio mg/L	29: 24 h Daphnia magna mg/L
7664-93-9		LC50 static	EC50

# Persistence and degradability No information available.

Bioaccumulation/Accumulation When released into the soil, this material may leach into ground water. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet or dry deposition.

Chemical name	Log Pow	
Sulfuric acid 7664-93-9	Not Established	

# **13. DISPOSAL CONSIDERATIONS**

Disposal Methods	Dispose according to federal, state, and local regulations. If permitted, neutralize reagent
	with sodium bicarbonate/sodium carbonate, add slurry to large volume of water to dilute,
	rinse to drain with excess water.

Contaminated packaging

Do not reuse empty containers.

Page 5/8

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	<b>RCRA - U Series Wastes</b>
Sulfuric acid 7664-93-9	Not Established	-	Not Established	Not Established
Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Sulfuric acid 7664-93-9	Not Established	Not Established	Not Established	Not Established
	Chemical name	·	California Hazardous Wa	aste Status
Sulfuric acid 7664-93-9			Toxic Corrosive	

## **14. TRANSPORT INFORMATION**

DOT	Not regulated
TDG	Not regulated
MEX	Not regulated
ICAO	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
RID	Not regulated
ADR	Not regulated
ADN	Not regulated

### **15. REGULATORY INFORMATION**

International Inventories	
TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

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 AICS - Australian Inventory of Chemical Substances

#### 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 %
Sulfuric acid	1,0



7664-93-9	110
SARA 311/312 Hazard Categories	
Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	Yes

<u>CWA (Clean Water Act)</u> 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
Sulfuric acid 7664-93-9	1000 lb	Not Established	Not Established	x

CERCLA This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Sulfuric acid 7664-93-9	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ

#### US State Regulations

California Proposition 65 has classified "strong inorganic acid mists containing sulfuric acid" as a chemical known to the State of California to cause cancer. This classification applies only to occupational exposures to these mists generated during manufacturing processes which sulfuric acid is used or produced.

Chemical name	California Proposition 65
Sulfuric acid 7664-93-9	Carcinogen

## U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sulfuric acid 7664-93-9	X	x	X

#### CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

Chemical name CPSC (Consumer Product Safety Comm Substances Sulfuric acid Add POISON to label, 16 ( 7664-93-9		Commission) - Specially Regulated tances		
			Add POISON to label, 16 CFR 1500,129	
		16. OTHER INFORM	ATION	
NFPA	Health hazard 1	Flammability 0	Instability 0	Physical and Chemical Hazards W
1	>			
Health Hazard File Hazard	1			
Reactivity	1			
Prepared by	Regulate	bry Affairs Department		
		Page 7/8		

#### Issuing Date Revision Date Reason for revision <u>Disclaimer</u>

#### Feb-16-2017 Dec-13-2016 SDS sections updated 2 6 7 11 13

Disclaimer The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet

Page 8/8



# Safety Data Sheet OSHA format Revision Number 0

# 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier	
Product name	Sulfuric Acid 1:1
Other means of identificatio	on and a second s
Product Code(s)	6141
UN-No	1830
Recommended use of the c	hemical and restrictions on use
Recommended Use	Laboratory chemicals. Use as a laboratory reagent. Industrial (not for food or food contact use).
Details of the supplier of the	e safety data sheet
	Manufacturer Address
	LaMotte Company, Inc.
	802 Washington Avenue
	P.O. Box 329

Chestertown, MD 21620 USA T 410-778-3100 F 410-778-9748

Emergency telephone numbers (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

Page 1/8

	2. HAZARDS	IDENTIFICATION	
Skin corrosion/irritation			Category 1 Sub-category A
Serious eye damage/eye irritation			Category 1
	EMEDGE	NCY OVERVIEW	
DANGER POISON	EMEROE		
Hazard statements Causes severe skin burns and ey	e damage.		
Appearance Clear colorless	Physica	al state liquid	Odor Odorless
Appearance Clear, coloness	Filysica	a state inquiti	Outri Outries
reuse. IF INHALED: Remove victim to fre IF SWALLOWED:. Rinse mouth. I Storage: Store locked up. Disposal: Dispose of contents/container to a Other Hazards May be harmful if swallowed.	ash air and keep at rest in a p Do NOT induce vomiting.	plant.	r breathing.
3	COMPOSITION/INFO	RMATION ON ING	REDIENTS*
	COMPOSITION/MPO	KinArion on me	INCEDIENTS
Chemical name		CAS No.	Weight-%
Sulfuric acid		7664-93-9	64
Boot Street Street	4. FIRST /	AID MEASURES	
First Aid Measures			
General advice	Do not get in eyes, on	skin, or on clothing. Do	o not breathe dust/fume/gas/mist/vapors/spray
Eye contact	IF IN EYES: Rinse cau present and easy to do physician immediately.	tiously with water for s b. Continue rinsing. Ke	everal minutes. Remove contact lenses, if ep eye wide open while rinsing. Call a

Page 2/8

#### 6141 \*- Sulfuric Acid 1:1

Skin contact	Wash off immediately with plenty of water for at least 15 minutes. Remove and isolate contaminated clothing and shoes. Wash contaminated clothing before reuse. Call a physician immediately.
Inhalation	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.
Ingestion	Do NOT induce vomiting. Drink plenty of water. Clean mouth with water. Call a physician immediately. Never give anything by mouth to an unconscious person.
Self-protection of the first aider	Use personal protection recommended in Section 8. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## **5. FIREFIGHTING MEASURES**

#### Suitable extinguishing media

Dry chemical. Carbon dioxide (CO2). DO NOT USE WATER.

Specific hazards arising from the chemical

React vigorously and/or explosively with water.

#### Hazardous combustion products

Contact with metals may evolve flammable hydrogen gas.

#### Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

# 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions, protective equipment and emergency procedures

Personal precautions	Use personal protection recommended in Section 8. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists.
Environmental precautions	See Section 12 for additional Ecological Information. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Methods and material for contai	inment and cleaning up
Methods for containment	Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).
Methods for cleaning up	Neutralize spill with alkaline material (sodium bicarbonate), being careful to prevent

# splattering, then containerize slurry and hold for later disposal. If local regulations permit, dilute slurry with water and rinse to drain with excess water. After cleaning, flush away traces with water.

#### 7. HANDLING AND STORAGE

Precautions for safe handling

Handling

Handle in accordance with good industrial hygiene and safety practice. Do not taste or swallow. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

### Conditions for safe storage, including any incompatibilities

Storage:

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from incompatible materials such as cyanides or sulfides. Store away from strong bases or

#### Page 3/8

metals. Do not store near combustible materials. Keep out of the reach of children.

Water. Strong bases. Metals. Combustible materials. Cyanides. Sulfides. Formaldehyde.

# Incompatible Products

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH	
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m <sup>3</sup> thoracic fraction	TWA: 1 mg/m <sup>3</sup> (vacated) TWA: 1 mg/m <sup>3</sup>	IDLH: 15 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>	
Appropriate engineering control	ols			
Engineering Measures	Ensure adequate ventilation, especially in confined areas.			
Individual protection measures	s, such as personal protective equips	ment		
Eye/Face Protection	Wear safety glasses with side shields (or goggles).			
Skin and body protection	Gloves & Lab Coat. Wear protec Nitrile rubber.	tive gloves/clothing. Imperviou	s clothing. Rubber gloves.	
Respiratory protection	When workers are facing concer appropriate certified respirators.	ntrations above the exposure li	mit they must use	
Hygiene Measures	Handle in accordance with good smoke when using this product. the product. Take off contaminat	industrial hygiene and safety p Wash hands before breaks an ed clothing and wash before re	practice. Do not eat, drink or d immediately after handling euse.	
	9. PHYSICAL AND CHEMIC	AL PROPERTIES		

### Information on basic physical and chemical properties

Physical state	liquid		
Appearance	Clear, colorless	Odor	Odorless
Property	Values	Remarks • Met	thod
pH	<1		
Melting point / freezing point	No information available		
Boiling point / boiling range	<100 °C / 214 °F		
Flash point	Not Applicable		
Evaporation rate			
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Specific gravity	~1.57		
Water solubility	No information available		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		
Other Information			

Page 4/8

Softening point	No information available		
Molecular weight	No information available		
VOC Content (%)	No information available		
Density	No information available		
Bulk density	No information available		
	10. STABILITY AND REACTIVITY		
Charle When	Stable under recommended storage conditions		
Stability	Stable under recommendes Scrage conditions.		
HATAPAOUE HOACTIONS	PERSON VIDENT WITH WATER CONTRACT WITH THE AS THAV EVOLVE HAITHTAUE HVUTUUET UAS.		
Hazarubus Reactions			

Excessive heat. Incompatible Products. Protect from light. Conditions to avoid

Incompatible materials

Hazardous decomposition products Hydrogen gas. Sulfur oxides (SOx).

# **11. TOXICOLOGICAL INFORMATION**

Water. Strong bases. Metals. Combustible materials. Cyanides. Sulfides. Formaldehyde.

Information on likely routes of exposure

#### **Component identification**

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Sulfuric acid	= 2140 mg/kg (Rat)	Not Established	= 510 mg/m <sup>3</sup> (Rat) 2 h

#### Information on toxicological effects

IARC has classified "strong inorganic acid mists containing sulfuric acid" as a known human carcinogen, (IARC category 1). This classification applies only to occupational exposures to these mists. (Steel pickling / the manufacture of isopropyl alcohol by strong-acid process Carcinogenicity

a man of the second sec	that uses suitu	ric acid).		
Chemical name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	Not Established	Group 1	Known	Not Established
Chronic toxicity	Chronic expos	ure to corrosive mists or	vapors may cause erosi	on of the teeth. Chronic

exposure to mists containing sulfuric acid is a cancer hazard.

ATEmix (oral)

3,344.00 mg/kg mg/l

#### **12. ECOLOGICAL INFORMATION**

#### Ecotoxicity

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Sulfuric acid	Not Established	500: 96 h Brachydanio rerio mg/L	29: 24 h Daphnia magna mg/L
7664-93-9		LC50 static	EC50

### Persistence and degradability

No information available.

#### **Bioaccumulation/Accumulation**

When released into the soil, this material may leach into ground water. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet or dry deposition.

Chemical name	Log Pow
Sulfuric acid 7664-93-9	Not Established

### **13. DISPOSAL CONSIDERATIONS**

Page 5/8

#### **Disposal Methods**

Dispose of contents/containers in accordance with local regulations. When in compliance with local regulations, neutralize reagent to pH 7 with dilute base (NaOH/soda ash/slaked lime), then rinse to drain with excess water.

## Contaminated packaging

Do not reuse empty containers.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Sulfuric acid 7664-93-9	Not Established		Not Established	Not Established
Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Sulfuric acid 7664-93-9	Not Established	Not Established	Not Established	Not Established
	Chemical name		California Hazardous W	aste Status
Sulfuric acid 7664-93-9			Toxic Corrosive	

# 14. TRANSPORT INFORMATION

DOT

Proper shipping name UN-No	SULFURIC ACID ( > 51%ACID) 1830	
Hazard Class	8	
Packing group	II.	
Reportable Quantity (RQ)	1000	
TDG	Not regulated	
MEX	Not regulated	
ICAO	Not regulated	
ATA		
UN-No	1830	
Proper shipping name	SULPHURIC ACID (<51% ACID)	
Hazard Class	8	
Packing group	И	
IMDG/IMO		
UN-No	1830	
Proper shipping name	SULPHURIC ACID (<51% ACID)	
Hazard Class	8	
Packing group	Ц	
RID		
UN-No	1830	
Proper shipping name	SULPHURIC ACID (<51% ACID)	
Hazard Class	8	
Packing group	Ш	
ADR		
UN-No	1830	
Proper shipping name	SULPHURIC ACID (<51% ACID)	
Hazard Class	8	
Packing group	11	
ADN	Not regulated	

Page 6/8

## **15. REGULATORY INFORMATION**

International Inventories	
TSCA	
DSL/NDSL	
EINECS/ELINCS	
ENCS	
IECSC	
KECL	
PICCS	
AICS	

Legend:

Complies Complies Complies Complies Complies Complies Complies Complies

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

AICS - Australian Inventory of Chemical Substances

#### 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 %	
Sulfuric acid 7664-93-9	1.0	
SARA 311/312 Hazard Categories		
Acute health hazard	Yes	
Chronic Health Hazard	Yes	
Fire hazard	No	
Sudden release of pressure hazard	No	
Reactive Hazard	Yes	

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
Sulfuric acid 7664-93-9	1000 lb	Not Established	Not Established	x

### CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Sulfuric acid 7664-93-9	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ

## **US State Regulations**

California Proposition 65 has classified "strong inorganic acid mists containing sulfuric acid" as a chemical known to the State of California to cause cancer. This classification applies only to occupational exposures to these mists generated during manufacturing processes which sulfuric acid is used or produced.

Chemical name	California Proposition 65
Sulfuric acid 7664-93-9	Carcinogen
U.S. State Right-to-Know Regulations	

New Jersey

Chemical name

Massachusetts

Pennsylvania

Page 7/8

Х

Sulfuric acid 7664-93-9 .....

Х

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

Х



The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet

Component Sulfuric acid 7664-93-9 ( 64 ) California Proposition 65 Carcinogen

Page 8/8



# Safety Data Sheet

**Revision Number 1** 

# 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier	
Product name	Alkaline Potassium lodide with Azide
Other means of identification	
Product Code(s)	7166
UN-No	2922
Recommended use of the che	mical and restrictions on use
Recommended Use	Industrial (not for food or food contact use). Use as a laboratory reagent.
Details of the supplier of the s	afety data sheet
	Manufacturer Address
	LaMotte Company, Inc.
	802 Washington Avenue

P.O. Box 329 Chestertown, MD 21620 USA T 410-778-3100 F 410-778-9748

Emergency telephone numbers (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

Page 1/9

### 2. HAZARDS IDENTIFICATION

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1

#### **EMERGENCY OVERVIEW**

DANGER

# Hazard statements

Harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage.



Physical state liquid

**Odor** Odorless

#### **Precautionary Statements - Prevention**

Appearance Clear, colorless

Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Do not taste or swallow. Do not breathe dust/fume/gas/mist/vapors/spray.

#### Response: Immediately call a poison center or physician.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center or doctor/physician if you feel unwell. Wash contaminated clothing before reuse. IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. IF SWALLOWED:. Do NOT induce vomiting.

#### Storage:

Store locked up. Disposal: Dispose of contents/container to an approved waste disposal plant.

#### Other Hazards

Harmful to aquatic life with long lasting effects.

Unknown Acute Toxicity 15% of the mixture consists of ingredient(s) of unknown toxicity.

#### 3. COMPOSITION/INFORMATION ON INGREDIENTS\*

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Chemical name	CAS No.	Weight-%
Sodium azide	26628-22-8	1.05
Potassium iodide*	7681-11-0	15
Potassium hydroxide	1310-58-3	70

#### 4. FIRST AID MEASURES

Page 2/9

First Aid Measures	
General advice	Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Do not delay care and transport of a seriously injured person.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Call a physician immediately.
Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. Immediate medical attention is required.
Inhalation	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician immediately.
Ingestion	Do NOT induce vomiting. Drink plenty of water. Immediate medical attention is required. Never give anything by mouth to an unconscious person. Rinse mouth.
Self-protection of the first aider	Use personal protection recommended in Section 8. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with eyes, skin and clothing.

# 5. FIREFIGHTING MEASURES

#### Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

# Specific hazards arising from the chemical React vigorously and/or explosively with water.

Hazardous combustion products Contact with metals may evolve flammable hydrogen gas.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

	6. ACCIDENTAL RELEASE MEASURES
Personal precautions, protectiv	e equipment and emergency procedures
Personal precautions	Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists. Ensure adequate ventilation, especially in confined areas.
Environmental precautions	See Section 12 for additional Ecological Information. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Methods and material for conta	inment and cleaning up
Methods for containment	Do not flush to sewer. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Dispose of contents/containers in accordance with local regulations.
Mathods for cleaning up	Clean contaminated surface thoroughly. After cleaning, flush away traces with water.
methods for cleaning up	

Precautions for safe handling

Page 3/9

Handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes, skin and clothing. Do not taste or swallow. Do not eat, drink or smoke when using this product.
Conditions for safe storage, i	ncluding any incompatibilities
Storage:	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Store away from incompatible materials. Protect from moisture. Keep away from metals and organic halogens. Do not flush into surface water or sanitary sewer system. Keep out of the reach of children.
Incompatible Products	Strong acids. Metals. Water reactive material.

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH	
Sodium azide 26628-22-8	Ceiling: 0.29 mg/m <sup>3</sup> NaN3 Ceiling: 0.11 ppm Hydrazoic acid vapor	(vacated) S* (vacated) Ceiling: 0.1 ppm HN3 (vacated) Ceiling: 0.3 mg/m <sup>3</sup> NaN3	Ceiling: 0.1 ppm HN3 Ceiling: 0.3 mg/m <sup>3</sup> NaN3	
Potassium iodide* 7681-11-0	TWA: 0.01 ppm inhalable fraction and vapor	*	Not Established	
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m <sup>3</sup>	(vacated) Ceiling: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>	

Ensure adequate ventilation, especially in confined areas.

**Engineering Measures** 

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear safety glasses with side shields (or goggles).

Skin and body protectionWear protective gloves/protective clothing/eye protection/face protection. Nitrile rubber.Respiratory protectionWhen workers are facing concentrations above the exposure limit they must use

appropriate certified respirators.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Take off contaminated clothing and wash before reuse.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Information on basic physical and chemical properties

Physical state	liquid		
Appearance	Clear, coloriess	Odor	Odorless
Property	Values	Remarks • Method	
pH	14		
Melting point / freezing point	No information available		
Boiling point / boiling range	No information available		
Flash point	Not Applicable		
Evaporation rate			
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		
Vapor density	No information available		

Page 4/9

# 7166 \*- Alkaline Potassium lodide with Azide

~1.5 (water = 1)
No information available
No information available
10. STABILITY AND REACTIVITY

Stability Hazardous Reactions	Stable under recommended storage conditions. Reacts violently with water. Contact with metals may evolve flammable hydrogen gas.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Excessive heat. Incompatible Products.
Incompatible materials	Strong acids. Metals. Water reactive material.

Hazardous decomposition products Carbon oxides (COx). Potassium Oxides.

# **11. TOXICOLOGICAL INFORMATION**

# Information on likely routes of exposure

## **Component identification**

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50	
Sodium azide = 27 mg/kg ( 26628-22-8		= 20 mg/kg (Rabbit) = 50 mg/kg ( Rat)	Not Established	
Potassium iodide* Not Established 7681-11-0		Not Established	Not Established	
Potassium hydroxide 1310-58-3	= 284 mg/kg (Rat)	Not Established	Not Established	

### Information on toxicological effects

Chemical name	ACGIH	IARC	NTP	OSHA
Sodium azide 26628-22-8	Not Established	Not Established	Not Established	Not Established
Potassium iodide* 7681-11-0	Not Established	Not Established	Not Established	Not Established
Potassium hydroxide 1310-58-3	Not Established	Not Established	Not Established	Not Established
Chronic toxicity	Prolonged ex	posure may cause chronic	c effects.	

Prolonged exposure may cause chronic effects.

ATEmix (oral) ATEmix (dermal)

# 475.00 mg/kg 1,619.00 mg/kg

# **12. ECOLOGICAL INFORMATION**

Ecotoxicity Harmful to aquatic life with long lasting effects

Unknown Aquatic Toxicity 15 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Sodium azide 26628-22-8	Not Established	0.7: 96 h Lepomis macrochirus mg/L LC50 0.8: 96 h Oncorhynchus mykiss mg/L LC50 5.46: 96 h Pimephales promelas mg/L LC50 flow-through	Not Established
Potassium iodide* 7681-11-0	Not Established	Not Established	Not Established
Potassium hydroxide 1310-58-3	Not Established	80: 96 h Gambusia affinis mg/L LC50 static	Not Established

Persistence and degradability Based on components product is expected to be poorly eliminated from water and poorly biodegradable.

Bioaccumulation/Accumulation Some components of this material have some potential to bioaccumulate but not all have been tested. Sodium azide: When released into the soil, this material is not expected to biodegrade. When released into the soil, this material is expected to leach into groundwater. When released into the air, this material may be moderately degraded by photolysis.

Chemical name	Log Pow	
Sodium azide 26628-22-8	Not Established	
Potassium iodide* 7681-11-0	Not Established	
Potassium hydroxide 1310-58-3	0.65 0.83	

# **13. DISPOSAL CONSIDERATIONS**

#### **Disposal Methods**

Dispose of waste product or used containers according to local regulations. Should not be released into the environment.

#### Contaminated packaging

Do not reuse empty containers.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	<b>RCRA - U Series Wastes</b>
Sodium azide 26628-22-8	Not Established	-	Not Established	Not Established
Potassium iodide* 7681-11-0	Not Established	-	Not Established	Not Established
Potassium hydroxide 1310-58-3	Not Established	-	Not Established	Not Established

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Sodium azide 26628-22-8	Not Established	P105	Not Established	Not Established
Potassium iodide* 7681-11-0	Not Established	Not Established	Not Established	Not Established
Potassium hydroxide 1310-58-3	Not Established	Not Established	Not Established	Not Established

Chemical name	California Hazardous Waste Status	
Sodium azide	Ignitable	
Potassium iodide*	*_	
7681-11-0	Test	
1310-58-3	Corrosive	

## **14. TRANSPORT INFORMATION**

Page 6/9

# 7166 \*- Alkaline Potassium lodide with Azide

DOT	
Proper shipping name	CORROSIVE LIQUIDS, TOXIC, NOS (Potassium hydroxide/Sodium azide solution)
UN-No	2922
Hazard Class	8
Subsidiary class	6.1
Packing group	11
Reportable Quantity (RQ)	1000
TDG	Not regulated
MEX	Not regulated
ICAO	Not regulated
IATA	
UN-No	2922
Proper shipping name	CORROSIVE LIQUIDS, TOXIC, N.O.S (Potassium hydroxide / Sodium azide solution)
Hazard Class	8
Subsidiary class	6.1
Packing group	11
IMDG/IMO	
UN-No	2922
Proper shipping name	CORROSIVE LIQUIDS, TOXIC, N.O.S (Potassium hydroxide / Sodium azide solution)
Hazard Class	8
Subsidiary class	6.1
Packing group	II.
RID	
UN-No	2922
Proper shipping name	CORROSIVE LIQUIDS, TOXIC, N.O.S (Potassium hydroxide / Sodium azide solution)
Hazard Class	8
Packing group	II
ADR	
UN-No	2922
Proper shipping name	CORROSIVE LIQUIDS, TOXIC, N.O.S (Potassium hydroxide / Sodium azide solution)
Hazard Class	8
Packing group	
ADN	Not regulated
	15. REGULATORY INFORMATION
International Inventories	Complian
ISCA Del MDel	Complies
ENECS/ELINCS	Complies
EINECS/ELINCS	Complies
IECSC	Complies
KECI	Complies
PICCS	Complies
AICS	Complies
Legend: TSCA - United States Toxic Substance DSL/NDSL - Canadian Domestic Subs EINECS/ELINCS - European Inventory ENCS - Japan Existing and New Chem IECSC - China Inventory of Existing Ch KECL - Korean Existing and Evaluated PICCS - Philippines Inventory of Chemica AICS - Australian Inventory of Chemica	s Control Act Section 8(b) Inventory tances List/Non-Domestic Substances List of Existing Chemical Substances/European List of Notified Chemical Substances inicial Substances remical Substances Chemical Substances icats and Chemical Substances al Substances

Page 7/9

#### 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 %	
Sodium azide 26628-22-8	1.0	
Potassium iodide* 7681-11-0	Not Established	
Potassium hydroxide 1310-58-3	Not Established	
SARA 311/312 Hazard Categories		
Acute health hazard	Yes	
Chronic Health Hazard	Yes	
Fire hazard	No	
Sudden release of pressure hazard	No	
Reactive Hazard	Yes	

#### 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
Sodium azide 26628-22-8	Not Established	Not Established	Not Established	Not Established
Potassium iodide* 7681-11-0	Not Established	Not Established	Not Established	Not Established
Potassium hydroxide 1310-58-3	1000 lb	Not Established	Not Established	Х

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

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Sodium azide 26628-22-8	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ
Potassium iodide* 7681-11-0		Not Established	
Potassium hydroxide 1310-58-3	1000 lb	Not Established	RQ 1000 lb final RQ RQ 454 kg final RQ

#### US State Regulations

Chemical name	California Proposition 65
Sodium azide 26628-22-8	Not Established
Potassium iodide* 7681-11-0	Not Established
Potassium hydroxide 1310-58-3	Not Established

#### U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sodium azide 26628-22-8	x	x	x
Potassium iodide* 7681-11-0	Not Established	Not Established	Not Established
Potassium hydroxide 1310-58-3	Х	X	x

Page 8/9

# CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

Chemical name		CPS	CPSC (Consumer Product Safety Commission) - Specially Regulated Substances		
Potassium hydroxide			Banned, 16 CFR 1500.17 Add POISON to label, 16 CFR 1500.129		
		<b>16. OTHER INFOR</b>	MATION	1	
NFPA	Health hazard 3	Flammability 0	Instability 0	Physical and Chemical Hazards W	
HMIS	Health hazard 3	Flammability 0	Stability 2		
Health Hazard	3				
Fire Hazard	0				
Reactivity	2				
Prepared by Issuing Date Disclaimer	Regulate Oct-03-2	ory Affairs Department 2016			

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet

Page 9/9


# Safety Data Sheet

**Revision Number 0** 

Issuing Date May-26-2015

# 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier Product name

Nitrate #2 CTA Tablets

Other means of identification Product Code(s) NN-3703A

 Recommended use of the chemical and restrictions on use

 Recommended Use
 Laboratory chemicals. Use as a laboratory reagent.

Details of the supplier of the safety data sheet

Manufacturer Address LaMotte Company, Inc. 802 Washington Avenue P.O. Box 329 Chestertown, MD 21620 USA T 410-778-3100 F 410-778-9748

Emergency telephone numbers (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

Page 1/8

	2. HAZARDS IDENTIFICATION	
Skin sensitization	Ca	tegory 1
	EMERGENCY OVERVIEW	
WARNING		
Hazard statements May cause an allergic skin reaction.		
Appearance Tablet	Physical state Solid	Odor Odorless

Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves. Keep out of the reach of children.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF SWALLOWED:. Drink 1 or 2 glasses of water. Call a physician immediately.

#### Storage:

Store in a well-ventilated place. Keep cool.

Disposal: Dispose of contents/container to an approved waste disposal plant.

#### Other Hazards

Causes mild skin irritation. Very toxic to aquatic life with long lasting effects.

Unknown Acute Toxicity 18.6% of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INF	ORMATION ON	INGREDIENTS*

Chemical name	CAS No.	Weight-%
Zinc Dust*	7440-66-6	1
Sulfanilic acid	121-57-3	1

LaMotte Company proprietary formulation under the State of New Jersey Trade Secret Protection Law, assigned the NJTSRN 80100291-5074p, and may be disclosed only in a medical emergency

### **4. FIRST AID MEASURES**

First Aid Measures	
General advice	Do not get in eyes, on skin, or on clothing.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

Page 2/8

# NN-3703A \*- Nitrate #2 CTA Tablets

Skin contact	Wash off with warm water and soap. If skin irritation persists, call a physician.
Inhalation	Remove to fresh air. If symptoms persist, call a physician.
Ingestion	Drink plenty of water. Never give anything by mouth to an unconscious person. Consult a physician if necessary.
Self-protection of the first aider	Use personal protection recommended in Section 8. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

# **5. FIREFIGHTING MEASURES**

Suitable extinguishing media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

	6. ACCIDENTAL RELEASE MEASURES	
Personal precautions, protectiv	e equipment and emergency procedures	
Personal precautions	Use personal protection recommended in Section 8.	
Environmental precautions	See Section 12 for additional Ecological Information. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.	
Methods and material for contain	inment and cleaning up	
Methods for containment	Prevent dust cloud. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).	
Methods for cleaning up	After cleaning, flush away traces with water.	
	7. HANDLING AND STORAGE	
Precautions for safe handling		
Handling	Handle in accordance with good industrial hygiene and safety practice. Do not taste or swallow. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.	
Conditions for safe storage, inc	luding any incompatibilities	
Storage:	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from direct sunlight.	
Incompatible Products	NITRIC ACID. Strong oxidizing agents.	
8.	EXPOSURE CONTROLS/PERSONAL PROTECTION	

### Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Zinc Dust* 7440-66-6	*	*	Not Established
Sulfanilic acid 121-57-3	*-	*	Not Established

Page 3/8

# Appropriate engineering controls

Engineering Measures	Showers
	Eyewash stations
	Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection	Avoid contact with eyes. If splashes are likely to occur:. Wear safety glasses with side shields (or goggles).
Skin and body protection	No special protective equipment required.
Respiratory protection	None required under normal usage.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection. Wash hands and face before breaks and immediately after handling the product.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid		
Appearance	Tablet	Odor	Odorless
Color	Gray		
Property	Values	Remarks • Met	thod
рН	3	(1 tablet in 10ml	L of water)
Melting point / freezing point	No information available		
Boiling point / boiling range	No information available		
Flash point	Not Applicable		
Evaporation rate			
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Specific gravity	No information available		
Water solubility	Soluble in water		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		
Other Information			
Softening point	No information available		
Molecular weight	No information available		
VOC Content (%)	No information available		
Density	No information available		
Bulk density	No information available		
	10. STABILITY AND	REACTIVITY	100

Page 4/8

### NN-3703A \*- Nitrate #2 CTA Tablets

Stability Hazardous polymerization	Stable. Hazardous polymerization does not occur.
Conditions to avoid	Exposure to air or moisture over prolonged periods. Extremes of temperature and direct sunlight.
Incompatible materials	NITRIC ACID. Strong oxidizing agents.

Hazardous decomposition products Carbon oxides (COx). Nitrogen oxides (NOx). Sulfur oxides (SOx).

# 11. TOXICOLOGICAL INFORMATION

Product Information

Product does not present an acute toxicity hazard based on known or supplied information

Information on likely routes of exposure

#### Component identification

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Zinc Dust* 7440-66-6	Not Established	Not Established	Not Established
Sulfanilic acid 121-57-3	= 12300 mg/kg (Rat)	Not Established	Not Established

#### Information on toxicological effects

Chemical name	ACGIH	IARC	NTP	OSHA
Zinc Dust* 7440-66-6	Not Established	Not Established	Not Established	Not Established
Sulfanilic acid 121-57-3	Not Established	Not Established	Not Established	Not Established

ATEmix (oral) ATEmix (dermal) 20,446.00 mg/kg 9,442.00 mg/kg

HIZ.00 mg/ng

# 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Very toxic to aquatic life with long lasting effects

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Zinc Dust* 7440-66-6	0.09 - 0.125: 72 h Pseudokirchneriella subcapitata mg/L EC50 static 0.11 - 0.271: 96 h Pseudokirchneriella subcapitata mg/L EC50 static	0.211 - 0.269: 96 h Pimephales promelas mg/L LC50 semi-static 2.16 - 3.05: 96 h Pimephales promelas mg/L LC50 flow-through 0.24: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.41: 96 h Oncorhynchus mykiss mg/L LC50 static 0.45: 96 h Cyprinus carpio mg/L LC50 semi-static 0.59: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 2.66: 96 h Pimephales promelas mg/L LC50 static 3.5: 96 h Lepomis macrochirus mg/L LC50 static 30: 96 h Cyprinus carpio mg/L LC50 7.8: 96 h Cyprinus carpio mg/L	0,139 - 0.908: 48 h Daphnia magna mg/L EC50 Static
Sulfanilic acid 121-57-3	91: 72 h Desmodesmus subspicatus mg/L EC50	77.8 - 129.6: 96 h Pimephales promelas mg/L LC50 static	85.66: 48 h Daphnia magna mg/L EC50

Persistence and degradability No information available.

Bioaccumulation/Accumulation No information available.

Page 5/8

Chemical name	Log Pow
Zinc Dust* 7440-66-6	Not Established
Sulfanilic acid 121-57-3	-0.9

# **13. DISPOSAL CONSIDERATIONS**

# **Disposal Methods**

Dispose according to federal, state, and local regulations. If permitted, dissolve in large volume of water, neutralize pH with dilute base, rinse to drain with excess water.

Contaminated packaging

Dispose of waste product or used containers according to local regulations.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	<b>RCRA - U Series Wastes</b>
Zinc Dust* 7440-66-6	Not Established	-	Not Established	Not Established
Sulfanilic acid 121-57-3	Not Established	-	Not Established	Not Established

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Zinc Dust* 7440-66-6	Not Established	Not Established	Not Established	Not Established
Sulfanilic acid 121-57-3	Not Established	Not Established	Not Established	Not Established

Chemical name	California Hazardous Waste Status
Zinc Dust* 7440-66-6	Ignitable powder Toxic
Sulfanilic acid 121-57-3	

# **14. TRANSPORT INFORMATION**

DOT	Not regulated
TDG	Not regulated
MEX	Not regulated
ICAO	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
RID	Not regulated
ADR	Not regulated
ADN	Not regulated

# 15. REGULATORY INFORMATION

nternational Inventories	
ISCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Does not comply
ENCS	Does not comply
ECSC	Does not comply
KECL	Does not comply
PICCS	Does not comply

Page 6/8

### AICS

Does not comply

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

AICS - Australian Inventory of Chemical Substances

#### 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 %
Zinc Dust* 7440-66-6	1.0
Sulfanilic acid 121-57-3	Not Established
SARA 311/312 Hazard Categories	
Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

<u>CWA (Clean Water Act)</u> 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)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Zinc Dust* 7440-66-6	Not Established	x	x	Not Established
Sulfanilic acid 121-57-3	Not Established	Not Established	Not Established	Not Established

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

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Zinc Dust* 7440-66-6	1000 lb	Not Established	RQ 454 kg final RQ RQ 1000 lb final RQ
Sulfanilic acid 121-57-3	*-	Not Established	-

# **US State Regulations**

<u>Callfornia Proposition 65</u> This product does not contain any Proposition 65 chemicals.

Chemica	name	California Proposition 65	
Zinc Dust* 7440-66-6		Not Established	
Sulfanilio 121-5	c acid 7-3	Not Established	
.S. State Right-to-Know Regula	ations		
Chemical name	New Jersey	Massachusetts	Pennsylvania

Chemical name

Pennsylvania

Page 7/8

# NN-3703A \*- Nitrate #2 CTA Tablets

Issuing Date May-26-2015

Zinc Dust* 7440-66-6	X	x	X
Sulfanilic acid 121-57-3	Not Established	Not Established	Not Established

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

	the state of the s	16. OTHER INFORM	ATION	
NFPA	Health hazard 1	Flammability 0	Instability 0	Physical and Chemica
Health hazard 1	Flammability 0	Stability 0		nazarus n/A
	>			
$\sim$				
Health Hazard	1			
Reactivity	0			
Prepared by Issuing Date	Regulate May-26-	ory Affairs Department 2015		
The information provi	ded on this SDS is correct	to the best of our knowled	ge, information and belie	of at the date of its publication.

The information provided on this SDS is contect to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet

Page 8/8



# **Safety Data Sheet**

OSHA format Revision Number 0

Issuing Date Aug-11-2017

Revision Date Dec-21-2016

# 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier			
Product name	BROMCRESOL GREEN METHYL RED INDICATOR TABLETS		
Other means of identificatio	n		
Product Code(s)	T-2311		
Recommended use of the cl	hemical and restrictions on use		
Recommended Use	Use as a laboratory reagent. Industrial (not for food or food contact use). Laboratory chemicals.		
Details of the supplier of the	e safety data sheet		
	Manufacturer Address LaMotte Company, Inc. 802 Washington Avenue P.O. Box 329 Chestertown, MD 21620 USA T 410-778-3100 F 410-778-9748		
Emergency telephone numb	Ders		
(CHEM-TEL):USA, Canada, F	Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585		

# 2. HAZARDS IDENTIFICATION

### **OSHA Regulatory Status**

This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

### EMERGENCY OVERVIEW

Appearance Blue green

Physical state Tablet

Odor None

### **Precautionary Statements - Prevention**

Keep out of the reach of children.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED:. Drink 1 or 2 glasses of water. Call a physician immediately.

#### Storage:

Store in a well-ventilated place. Keep cool.

Other Hazards

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

# 3. COMPOSITION/INFORMATION ON INGREDIENTS\*

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Page 1/7

Chemical name	CAS No.	Weight-%
Potassium chloride	7447-40-7	>98

# 4. FIRST AID MEASURES

First Aid Measures	
General advice	Show this safety data sheet to the doctor in attendance. Keep out of reach of children.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
Skin contact	Wash off with soap and plenty of water removing all contaminated clothes and shoes. If symptoms persist, call a physician.
Inhalation	Remove to fresh air.
Ingestion	Drink plenty of water. Consult a physician if necessary.
Self-protection of the first aider	Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

**5. FIREFIGHTING MEASURES** 

Suitable extinguishing media Dry chemical, CO<sub>2</sub>, water spray or alcohol-resistant foam.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL F	RELEASE	MEASURES
-----------------	---------	----------

#### Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with eyes, skin and clothing. **Environmental precautions** See Section 12 for additional Ecological Information. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Methods and material for containment and cleaning up Methods for containment Sweep up in a manner that does not dispurse dust and shovel into suitable containers for disposal. Methods for cleaning up If local regulations permit, dissolve and rinse to drain with excess water. After cleaning, flush away traces with water. 7. HANDLING AND STORAGE

Precautions for safe handling

Handling

Avoid contact with eyes, skin and clothing. Handle in accordance with good industrial hygiene and safety practice. Do not taste or swallow. Do not eat, drink, or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Page 2/7

Storage:

Keep container tightly closed in a dry and well-ventilated place. Protect from moisture, Keep out of the reach of children.

**Incompatible Products** 

Strong oxidizing agents.

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

# Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Potassium chloride 7447-40-7		*.	Not Established
Appropriate engineering contro	bls		
Engineering Measures	Showers Eyewash stations Ventilation systems.		
Individual protection measures	, such as personal protective equ	ipment	
Eye/Face Protection	Wear safety glasses with side	shields (or goggles).	
Skin and body protection	Protective gloves.		
Respiratory protection	None required under normal u experienced, NIOSH/MSHA a	sage. If exposure limits are exported and the proved respiratory protection	ceeded or irritation is should be worn.
Hygiene Measures	Handle in accordance with go	od industrial hygiene and safe	ty practice.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

# Information on basic physical and chemical properties

Physical state	Tablet			
Appearance	Blue green	Odor	None	
Property	Values_	Remarks • Met (1 tablet in 10mL	hod of water)	
pH	6	(1 tablet in 10mL	of water)	
Melting point / freezing point	No information available			
Boiling point / boiling range	No information available			
Flash point	Not Applicable			
Evaporation rate				
Flammability (solid, gas)	No information available			
Flammability Limit in Air				
Upper flammability limit:	No information available			
Lower flammability limit:	No information available			
Vapor pressure	No information available			
Vapor density	No information available			
Specific gravity	No information available			
Water solubility	No information available			
Solubility in other solvents	No information available			
Partition coefficient	No information available			
Autoignition temperature	No information available			
Decomposition temperature	No information available			
Kinematic viscosity	No information available			
Dynamic viscosity	No information available			
Explosive properties	No information available			
Oxidizing properties	No information available			
Other Information				

Page 3/7

Issuing Date Aug-11-2017

	10. STABILITY AND REACTIVITY			
Bulk density	No information available			
Density	No information available			
VOC Content (%)	No information available			
Molecular weight	No information available			
Softening point	No information available			

Stability	Stable.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Moisture. Excessive heat.
Incompatible materials	Strong oxidizing agents.

Hazardous decomposition products Hazardous decomposition products formed under fire conditions -. Carbon oxides (COx).

# 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

#### Component identification Chemical name Potassium chloride 7447-40-7 ATEmix (oral) ATEmix (dermal) Inhalation LC50 = 2600 mg/kg (Rat) Not Established Not Established

#### Information on toxicological effects

Chemical name	ACGIH	IARC	NTP	OSHA
Potassium chloride 7447-40-7	Not Established	Not Established	Not Established	Not Established

ATEmix (oral)

2,642.00 mg/kg

# **12. ECOLOGICAL INFORMATION**

Ecotoxicity Harmful to aquatic life with long lasting effects

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Potassium chloride	2500: 72 h Desmodesmus	750 - 1020: 96 h Pimephales	825: 48 h Daphnia magna mg/L
7447-40-7	subspicatus mg/L EC50	promelas mg/L LC50 static 1060:	EC50 83: 48 h Daphnia magna
		96 h Lepomis macrochirus mg/L	mg/L EC50 Static
		LC50 static	

# Persistence and degradability No information available.

# Bioaccumulation/Accumulation No information available.

Chemical name	Log Pow	
Potassium chloride 7447-40-7	Not Established	

13. DISPUSAL CONSIDERATIONS
-----------------------------

Disposal Methods	Dispose of waste product or used containers according to local regulations. Dispose of contents/containers in accordance with local regulations.
Contaminated packaging	Do not reuse empty containers.

Page 4/7

**Issuing Date** Aug-11-2017

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Potassium chloride 7447-40-7	Not Established		Not Established	Not Established
Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Potassium chloride 7447-40-7	Not Established	Not Established	Not Established	Not Established
	Chemical name		California Hazardous Wa	aste Status
Potassium chloride 7447-40-7			*_	

# **14. TRANSPORT INFORMATION**

DOT	Not regulated
TDG	Not regulated
MEX	Not regulated
ICAO	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
RID	Not regulated
ADR	Not regulated
ADN	Not regulated

# **15. REGULATORY INFORMATION**

Complies
Complies
Does not comply
Does not comply
Complies
Complies
Complies
Complies

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 AICS - Australian Inventory of Chemical Substances

### **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 %

Page 5/7

### T-2311 \*- BROMCRESOL GREEN METHYL **RED INDICATOR TABLETS**

Issuing Date Aug-11-2017

Potassium chloride 7447-40-7	Not Established	
SARA 311/312 Hazard Categories		
Acute health hazard	No	
Chronic Health Hazard	No	
Fire hazard	No	
Sudden release of pressure hazard	No	
Reactive Hazard	No	

#### CWA (Clean Water Act)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Potassium chloride 7447-40-7	Not Established	Not Established	Not Established	Not Established

<u>CERCLA</u> 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

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Potassium chloride 7447-40-7	•	Not Established	

### US State Regulations

This product does not contain any Proposition 65 chemicals.

Chemical name	California Proposition 65		
Potassium chloride 7447-40-7	Not Established		
U.S. State Right-to-Know Regulations			

Chemical name	New Jersey	Massachusetts	Pennsylvania
Potassium chloride 7447-40-7	Not Established	Not Established	Not Established

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

		16. OTHER INFORM	ATION	
NFPA	Health hazard 0	Flammability 0	Instability 0	Physical and Chemical Hazards N/A
HMIS	Health hazard 1	Flammability 0	Stability 0	
	/			
Health Hazard	1			
Fire Hazard	·0			
Reactivity	0			
Issuing Date Revision Date	Aug-11 Dec-21	-2017 -2016		
Disclaimer The information prov	ided on this CDC is served	t to the best of our knowled	ten information and ball	6 - 1 4h - d- 1 - 6 14 1 17 - 17

The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release

Page 6/7

and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet

Page 7/7



Safety Data Sheet

**Revision Number** 0

Issuing Date Apr-18-2017

Revision Date May-19-2016

# 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier	
Product name	MIXED ACID REAGENT
Other means of identificatio	n
Product Code(s)	V-6278
Recommended use of the cl	hemical and restrictions on use
Recommended Use	Use as a laboratory reagent. Laboratory chemicals. Industrial (not for food or food contact use).
Details of the supplier of the	e safety data sheet
	Manufacturer Address
	LaMotte Company, Inc.
	802 Washington Avenue
	P.O. Box 329
	Chestertown, MD 21620 USA

T 410-778-3100 F 410-778-9748

Emergency telephone numbers (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

Page 1/9

# 2. HAZARDS IDENTIFICATION

Serious eye damage/eye irritation

Category 2A EMERGENCY OVERVIEW WARNING Hazard statements Causes serious eye irritation. Physical state liquid Odor vinegar Appearance Clear Blue green

# **Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling. Wear eye/face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF SWALLOWED:. Drink 1 or 2 glasses of water. Call a physician immediately.

Storage: Store in a well-ventilated place. Keep cool.

Disposal:

Dispose of contents/containers in accordance with local regulations.

# **3. COMPOSITION/INFORMATION ON INGREDIENTS\***

Chemical name	CAS No.	Weight-%
Acetic acid	64-19-7	2
Citric acid	77-92-9	4
Sodium chloride USP	7647-14-5	10
Ammonium chloride	12125-02-9	17
Water	7732-18-5	to 100%

#### 4. FIRST AID MEASURES

**First Aid Measures** 

General advice

Eye contact

Skin contact

attendance. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately. Wash off immediately with soap and plenty of water for at least 15 minutes. Take off

contaminated clothing and wash before reuse. Consult a physician if necessary.

Do not get in eyes, on skin, or on clothing. Show this safety data sheet to the doctor in

Page 2/9

Notes to Physician	Treat symptomatically.
Self-protection of the first aider	Use personal protection recommended in Section 8. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
ingesteri	
Ingestion	Drink plenty of water, Consult a physician if necessary.
Inhalation	Remove to fresh air. If symptoms persist, call a physician.

#### Suitable extinguishing media

Storage:

Incompatible Products

Control parameters

Chemical name

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

	6. ACCIDENTAL RELEASE MEASURES		
Personal precautions, protectiv	e equipment and emergency procedures		
Personal precautions	Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing.		
Environmental precautions	See Section 12 for additional Ecological Information. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.		
Methods and material for contai	inment and cleaning up_		
Methods for containment	Dispose of contents/containers in accordance with local regulations. Absorb/Cover spill with sodium bicarbonate or sodium carbonate to neutralize, then place in a chemical waste container for later disposal.		
Methods for cleaning up	After cleaning, flush away traces with water. If local regulations permit, rinse to drain with excess water.		
	7. HANDLING AND STORAGE		
Precautions for safe handling			
Handling	Handle in accordance with good industrial hygiene and safety practice. Do not taste or swallow. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.		
Conditions for safe storage, inc	luding any incompatibilities		

moisture. Keep out of the reach of children.

ACGIH TLV

Alkalis. Strong oxidizing agents. Strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Page 3/9

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

**OSHA PEL** 

NIOSH IDLH

# V-6278 \*- MIXED ACID REAGENT

Issuing Date Apr-18-2017

Acetic acid 64-19-7	STEL: 15 ppm TWA: 10 ppm	TWA: 10 ppm TWA: 25 mg/m <sup>3</sup> (vacated) TWA: 10 ppm (vacated) TWA: 25 mg/m <sup>3</sup>	IDLH: 50 ppm TWA: 10 ppm TWA: 25 mg/m <sup>3</sup> STEL: 15 ppm STEL: 37 mg/m <sup>3</sup>
Citric acid 77-92-9	*-	*-	Not Established
Sodium chloride USP 7647-14-5	*-	*	Not Established
Ammonium chloride 12125-02-9	STEL: 20 mg/m <sup>3</sup> fume TWA: 10 mg/m <sup>3</sup> fume	(vacated) TWA: 10 mg/m <sup>3</sup> fume (vacated) STEL: 20 mg/m <sup>3</sup> fume	TWA: 10 mg/m <sup>3</sup> fume STEL: 20 mg/m <sup>3</sup> fume
Water 7732-18-5	•	*	Not Established

Appropriate engineering controls

Engineering Measures	Provide appropriate exhaust ventilation at places where dust is formed. Ensure that eyewash stations and safety showers are close to the workstation location.		
Individual protection measures	s, such as personal protective equipment		
Eye/Face Protection	Wear safety glasses with side shields (or goggles). Avoid contact with eyes.		
Skin and body protection	Gloves & Lab Coat. Impervious clothing. Protective gloves. Rubber gloves. Nitrile rubber.		
Respiratory protection	Maintain adequate ventilation.		
Hygiene Measures	Avoid contact with eyes, skin and clothing. Handle in accordance with good industrial hygiene and safety practice. Wash hands and face before breaks and immediately after handling the product.		

9. PHYSICAL AND CHEMICAL PROPERTIES

# Information on basic physical and chemical properties

Physical state	liquid		
Appearance	Clear Blue green	Odor	vinegar
Property	Values	Remarks • Method	
pH	2-3		
Melting point / freezing point	No information available		
Boiling point / boiling range	> 100 °C / 212 °F		
Flash point	Not Applicable		
Evaporation rate			
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Specific gravity	No data available		
Water solubility	Soluble in water		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		
Other Information			

Page 4/9

# V-6278 \*- MIXED ACID REAGENT

Issuing Date Apr-18-2017

Softening point Molecular weight VOC Content (%) Density Bulk density	No information available No information available No information available No information available No information available		
•	10. STABILITY AND REACTIVITY		
Stability	Stable.		
Hazardous reactions	Hazardous polymenization does not occur.		
Conditions to avoid	s to avoid Exposure to air or moisture over prolonged periods. Excessive heat.		
Incompatible materials	Alkalis, Strong exidizing agents, Strong bases,		

Hazardous decomposition products Ammonia. Hydrogen chloride. Sodium oxides.

# **11. TOXICOLOGICAL INFORMATION**

**Product Information** 

Product does not present an acute toxicity hazard based on known or supplied information

Information on likely routes of exposure

Inhalation Eye contact Skin contact Ingestion

None known. May cause temporary eye irritation.

Substance may cause slight skin irritation.

May be harmful if swallowed. May cause gastrointestinal discomfort if consumed in large amounts.

#### **Component identification**

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Acetic acid 64-19-7	= 3310 mg/kg(Rat)	= 1060 mg/kg (Rabbit)	= 11.4 mg/L (Rat) 4 h
Citric acid 77-92-9	= 3 g/kg (Rat) = 3000 mg/kg (Rat )	Not Established	Not Established
Sodium chloride USP 7647-14-5	= 3 g/kg(Rat)	> 10 g/kg (Rabbit)	> 42 g/m³(Rat)1 h
Ammonium chloride 12125-02-9	= 1650 mg/kg(Rat)	Not Established	Not Established
Water 7732-18-5	> 90 mL/kg (Rat)	Not Established	Not Established

Information on toxicological effects
Carcinogenicity
There are no known carcinogenic chemicals in this product.
NTP

Chemical name	ACGIH	IARC	NTP	OSHA
Acetic acid 64-19-7	Not Established	Not Established	Not Established	Not Established
Citric acid 77-92-9	Not Established	Not Established	Not Established	Not Established
Sodium chloride USP 7647-14-5	Not Established	Not Established	Not Established	Not Established
Ammonium chloride 12125-02-9	Not Established	Not Established	Not Established	Not Established
Water 7732-18-5	Not Established	Not Established	Not Established	Not Established

ATEmix (oral) ATEmix (dermal) 6,421.00 mg/kg 34,641.00 mg/kg

# **12. ECOLOGICAL INFORMATION**

Page 5/9

### Ecotoxicity

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Acetic acid 64-19-7	Not Established	75: 96 h Lepomis macrochirus mg/L LC50 static 79: 96 h Pimephales promelas mg/L LC50 static	47: 24 h Daphnia magna mg/L EC50 65: 48 h Daphnia magna mg/L EC50 Static
Citric acid 77-92-9	Not Established	1516: 96 h Lepomis macrochirus mg/L LC50 static	120: 72 h Daphnia magna mg/L EC50
Sodium chloride USP 7647-14-5	Not Established	4747 - 7824: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 5560 - 6080: 96 h Lepomis macrochirus mg/L LC50 flow-through 6020 - 7070: 96 h Pimephales promelas mg/L LC50 static 6420 - 6700: 96 h Pimephales promelas mg/L LC50 static 12946: 96 h Lepomis macrochirus mg/L LC50 static 7050: 96 h Pimephales promelas mg/L LC50 semi-static	340.7 - 469.2: 48 h Daphnia magna mg/L EC50 Static 1000: 48 h Daphnia magna mg/L EC50
Ammonium chloride 12125-02-9	Not Established	209: 96 h Cyprinus carpio mg/L LC50 static 725: 24 h Lepomis macrochirus mg/L LC50	202: 24 h Daphnia magna mg/L LC50
Water 7732-18-5	Not Established	Not Established	Not Established

# Persistence and degradability No information available.

# Bioaccumulation/Accumulation No information available.

Chemical name	Log Pow
Acetic acid 64-19-7	-0.31
Citric acid 77-92-9	-1.72
Sodium chloride USP 7647-14-5	Not Established
Ammonium chloride 12125-02-9	Not Established
Water 7732-18-5	Not Established

# 13. DISPOSAL CONSIDERATIONS

### **Disposal Methods**

Dispose of contents/containers in accordance with local regulations.

Contaminated packaging

Dispose of waste product or used containers according to local regulations.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	<b>RCRA - U Series Wastes</b>
Acetic acid 64-19-7	Not Established	-	Not Established	Not Established
Citric acid 77-92-9	Not Established	•	Not Established	Not Established
Sodium chloride USP 7647-14-5	Not Established	-	Not Established	Not Established
Ammonium chloride 12125-02-9	Not Established		Not Established	Not Established
Water 7732-18-5	Not Established		Not Established	Not Established
Chemical name	RCRA - Halogenated	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes

Page 6/9

# V-6278 \*- MIXED ACID REAGENT

# Issuing Date Apr-18-2017

Acetic acid 64-19-7	Not Established	Not Established	Not Established	Not Established
Citric acid 77-92-9	Not Established	Not Established	Not Established	Not Established
Sodium chloride USP 7647-14-5	Not Established	Not Established	Not Established	Not Established
Ammonium chloride 12125-02-9	Not Established	Not Established	Not Established	Not Established
Water 7732-18-5	Not Established	Not Established	Not Established	Not Established

Chemical name	California Hazardous Waste Status
Acetic acid 64-19-7	Toxic Corrosive Ignitable
Citric acid 77-92-9	
Sodium chloride USP 7647-14-5	*
Ammonium chloride 12125-02-9	*-
Water 7732-18-5	

# **14. TRANSPORT INFORMATION**

DOT	Not regulated
TDG	Not regulated
MEX	Not regulated
ICAO	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
RID	Not regulated
ADR	Not regulated
ADN	Not regulated

# **15. REGULATORY INFORMATION**

International Inventories	
TSCA	Complies
DSL/NDSL	Does not comply
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Complies
KECL	Does not comply
PICCS	Complies
AICS	Complies

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

Page 7/9

**KECL** - Korean Existing and Evaluated Chemical Substances **PICCS** - Philippines Inventory of Chemicals and Chemical Substances **AICS** - Australian Inventory of Chemical Substances

### **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 %
Acetic acid 64-19-7	Not Established
Citric acid 77-92-9	Not Established
Sodium chloride USP 7647-14-5	Not Established
Ammonium chloride 12125-02-9	1.0
Water 7732-18-5	Not Established
SARA 311/312 Hazard Categories	
Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

## 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
Acetic acid 64-19-7	5000 lb	Not Established	Not Established	X
Citric acid 77-92-9	Not Established	Not Established	Not Established	Not Established
Sodium chloride USP 7647-14-5	Not Established	Not Established	Not Established	Not Established
Ammonium chloride 12125-02-9	5000 lb	Not Established	Not Established	X
Water 7732-18-5	Not Established	Not Established	Not Established	Not Established

CERCLA This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Acetic acid 64-19-7	5000 lb	Not Established	RQ 5000 lb final RQ RQ 2270 kg final RQ
Citric acid 77-92-9	*	Not Established	
Sodium chloride USP 7647-14-5	*	Not Established	-
Ammonium chloride 12125-02-9	5000 lb	Not Established	RQ 5000 lb final RQ RQ 2270 kg final RC
Water 7732-18-5	*	Not Established	-

US State Regulations

This product does not contain any Proposition 65 chemicals.

Chemical name	California Proposition 65
Acetic acid	Not Established
64-19-7	

# V-6278 \*- MIXED ACID REAGENT

Citric acid 77-92-9	Not Established
Sodium chloride USP 7647-14-5	Not Established
Ammonium chloride 12125-02-9	Not Established
Water 7732-18-5	Not Established

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Acetic acid 64-19-7	x	x	X
Citric acid 77-92-9	Not Established	Not Established	Not Established
Sodium chloride USP 7647-14-5	Not Established	Not Established	Not Established
Ammonium chloride 12125-02-9	x	x	×
Water 7732-18-5	Not Established	Not Established	X

### CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

	Chemical name	CPS	CPSC (Consumer Product Safety Commission) - Specially Regulated Substances		
	Acetic acid 64-19-7		Add POISON to lab	el, 16 CFR 1500.129	
		<b>16. OTHER INFOR</b>	MATION		
NFPA	Health hazard 1	Flammability 0	Instability 0	Physical and Chemical Hazards N/A	



Prepared by Issuing Date Revision Date Disclaimer Regulatory Affairs Department Apr-18-2017 May-19-2016

Disclaimer The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet

Page 9/9



# Safety Data Sheet

OSHA format Revision Number 0

# 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

<u>Product identifier</u> Product name	COLOR DEVELOPING REAGENT
Other means of identification	
Product Code(s)	V-6281
Recommended use of the che	mical and restrictions on use
Recommended Use	Use as a laboratory reagent. Laboratory chemicals. Industrial (not for food or food contact use).
Details of the supplier of the s	safety data sheet
	LaMotte Company, Inc.
	802 Washington Avenue
	P.O. Box 329
	Chestertown, MD 21620 USA
	T 410-778-3100
	F 410-778-9748
Emergency telephone number	r
24 Hour Emergency Number (C collect) 813-248-0585	HEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call

### 2. HAZARDS IDENTIFICATION

Acute toxicity - Oral	Category 4	
Serious eye damage/eye irritation	Category 2A	
Specific target organ toxicity (repeated exposure)	Category 2	

### EMERGENCY OVERVIEW

# Hazard statements

WARNING

Harmful if swallowed. Causes serious eye irritation. May cause damage to organs through prolonged or repeated exposure.



Appearance White

Physical state powder

Odor Odorless

#### **Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear eye/face protection. Do not breathe dust/fume/gas/mist/vapors/spray.

#### **Precautionary Statements - Response**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

- IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse.
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

Page 1/7

# Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool.

## Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

Other Hazards Harmful to aquatic life with long lasting effects

Unknown Acute Toxicity 36% of the mixture consists of ingredient(s) of unknown toxicity.

# 3. COMPOSITION/INFORMATION ON INGREDIENTS\*

Chemical name	CAS No	Weight-%
Manganese sulfate monohydrate	10034-96-5	10
Ammonium chloride	12125-02-9	45-55

	4. FIRST AID MEASURES
First Aid Measures	
General advice	Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Call a physician immediately.
Skin contact	Wash off immediately with plenty of water for at least 15 minutes. Remove and isolate contaminated clothing and shoes. Wash contaminated clothing before reuse. Call a physician immediately.
Inhalation	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Drink plenty of water. Never give anything by mouth to an unconscious person.
Self-protection of the first alder	Use personal protection recommended in Section 8. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

## 5. FIREFIGHTING MEASURES

#### Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards arising from the chemical Thermal decomposition can lead to release of toxic and corrosive gases/vapors.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

# 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

# Page 2/7

Personal precautions	Use personal protection recommended in Section 8. Ensure adequate ventilation. Remove all sources of ignition.
Environmental precautions	See Section 12 for additional Ecological Information.
Methods and material for conta	inment and cleaning up
Methods for containment	Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13). Absorb/Cover spill with sodium bicarbonate or sodium carbonate to neutralize, then place in a chemical waste container for later disposal.
Methods for cleaning up	After cleaning, flush away traces with water.
	7. HANDLING AND STORAGE
Precautions for safe handling	
Handling	Handle in accordance with good industrial hygiene and safety practice. Do not taste or swallow. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Avoid breathing vapors or mists.
Conditions for safe storage, inc	luding any incompatibilities
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from oxidizing agents. Keep away from heat and sources of ignition. Keep away from heat, moisture, and incompatibles. Protect from moisture. Do not allow contact with air. Keep out of the reach of children.
Incompatible Products	Strong acids. Strong oxidizing agents. Strong bases. Finely powdered metals.
8.	EXPOSURE CONTROLS/PERSONAL PROTECTION

# Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Manganese sulfate monohydrate 10034-96-5	TWA: 0.02 mg/m <sup>3</sup> Mn TWA: 0.1 mg/m <sup>3</sup> Mn	(vacated) Ceiling: 5 mg/m <sup>3</sup> Ceiling: 5 mg/m <sup>3</sup> Mn	IDLH: 500 mg/m <sup>3</sup> Mn TWA: 1 mg/m <sup>3</sup> Mn STEL: 3 mg/m <sup>3</sup> Mn
Ammonium chloride 12125-02-9	STEL: 20 mg/m <sup>3</sup> fume TWA: 10 mg/m <sup>3</sup> fume	(vacated) TWA: 10 mg/m <sup>3</sup> fume (vacated) STEL: 20 mg/m <sup>3</sup> fume	TWA: 10 mg/m <sup>3</sup> fume STEL: 20 mg/m <sup>3</sup> fume

NIOSH IDLH: Immediately Dangerous to Life or Health

# Appropriate engineering controls

Engineering Measures

Showers	
Eyewash stations	
Ventilation systems.	

Individual	protection	measures,	such	as	personal	protective	equipment	

Eye/Face Protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Gloves & Lab Coat. Impervious clothing. Rubber gloves. Protective gloves. Nitrile rubber.
Respiratory protection	Handle in an enclosing hood with exhaust ventilation. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Hygiene Measures	Use only with adequate ventilation. Wear suitable gloves and eye/face protection. Avoid contact with eyes, skin and clothing. Wash hands and face before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety

Page 3/7

	9. PHYSICAL AND CHEMIC	CAL PROPERTIES	
Information on basic physical an	d chemical properties		
Physical state	powder		
Appearance	White	Odor	Odorless
Property	Values	Remarks • Method	
pH	7	(0.1g/10mL water)	
Melting point / freezing point	No information available		
Boiling point / boiling range	No information available		
Flash point	Not Applicable		
Evaporation rate	the second second		
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Specific gravity	No information available		
Water solubility	No information available		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		
Other Information			
Softening point	No information available		
Molecular weight	No information available		
VOC Content (%)	No information available		
Density	No information available		
Bulk density	No information available		
	10. STABILITY AND	REACTIVITY	

# Stability

Hazardous polymerization

Stable under recommended storage conditions. Hazardous polymerization does not occur.

Conditions to avoidExposure to air or moisture over prolonged periods. Excessive heat. Incompatible products.Incompatible materialsStrong acids. Strong oxidizing agents. Strong bases. Finely powdered metals.Hazardous decomposition productsAmmonia. Hazardous decomposition products formed under fire conditions - carbon oxides (COx), nitrogen oxides (NOx), sulfur oxides (SOx), hydrogen chloride gas.

# **11. TOXICOLOGICAL INFORMATION**

### Information on likely routes of exposure

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Manganese sulfate monohydrate 10034-96-5	= 782 mg/kg (Rat)	Not Established	Not Established
Ammonium chloride 12125-02-9	= 1650 mg/kg (Rat)	Not Established	Not Established

Page 4/7

ļ	Informati	ion on	toxico	ogical	effects	
					14.1 14	

Chemical name	ACGIH	IARC	NTP	OSHA
Manganese sulfate monohydrate 10034-96-5	Not Established	Not Established	Not Established	Not Established
Ammonium chloride 12125-02-9	Not Established	Not Established	Not Established	Not Established

Group 2A - Probably Carcinogenic to Humans **Chronic toxicity** 

Chronic manganese poisoning primarily involves the central nervous system. Chronic manganese poisoning can result from excessive inhalation and ingestion. Early symptoms include sluggishness, sleepiness, and weakness in the legs. Kidney effects. Chronic inhalation exposure can cause lung damage.

ATEmix (oral)

1,428.00

# **12. ECOLOGICAL INFORMATION**

#### Ecotoxicity

Unknown Aquatic Toxicity 3 % of the	known Aquatic Toxicity 3 % of the mixture consists of components(s) of unknown hazards to the aquatic environment				
Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)		
Manganese sulfate monohydrate 10034-96-5	Not Established	Not Established	Not Established		
Ammonium chloride 12125-02-9	Not Established	209: 96 h Cyprinus carpio mg/L LC50 static 725: 24 h Lepomis macrochirus mg/L LC50	202: 24 h Daphnia magna mg/L LC50		

### Persistence and degradability

No information available.

# Bioaccumulation/Accumulation No information available.

Chemical name	Log Pow
Manganese sulfate monohydrate 10034-96-5	Not Established
Ammonium chloride 12125-02-9	Not Established

# **13. DISPOSAL CONSIDERATIONS**

**Disposal Methods** 

Dispose of waste product or used containers according to local regulations.

**Contaminated packaging** 

Dispose of waste product or used containers according to local regulations.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	<b>RCRA - U Series Wastes</b>
Manganese sulfate monohydrate 10034-96-5	Not Established		Not Established	Not Established
Ammonium chloride 12125-02-9	Not Established	·	Not Established	Not Established
Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Serles Wastes	RCRA - K Series Wastes
Chemical name Manganese sulfate monohydrate 10034-96-5	RCRA - Halogenated Organic Compounds Not Established	RCRA - P Series Wastes Not Established	RCRA - F Serles Wastes Not Established	RCRA - K Series Wastes Not Established

Chemical name	California Hazardous Waste Status
Manganese sulfate monohydrate 10034-96-5	-

Page 5/7

# V-6281 - COLOR DEVELOPING REAGENT

Issuing Date May-29-2015

Ammonium chloride - 12125-02-9		
	14. TRANS	PORT INFORMATION
DOT	Not regulated	
IATA	Not regulated	
MDG/IMO_	Not regulated	
	15 PECIII A	
Internetional Inventorie	IS. REGULA	TORT INFORMATION
TSCA DSL/NDSL EINECS/ELINCS ENCS IECSC KECL PICCS AICS TSCA - United States Toxic St DSL/NDSL - Canadian Domes EINECS/ELINCS - European I ENCS - Japan Existing and Ne	Complies Does not comply Does not comply Does not comply Complies Does not comply Complies Complies Complies Complies the Substances List/Non-Domestic S Inventory of Existing Chemical Substances	Inventory Substances List tances/European List of Notified Chemical Substances
ECSC - China Inventory of Ex KECL - Korean Existing and E PICCS - Philippines Inventory AICS - Australian Inventory of	isting Chemical Substances valuated Chemical Substances of Chemicals and Chemical Substar Chemical Substances	nces
US Federal Regulation	5	
SARA 313 Section 313 of Title III of the or chemicals which are sub	e Superfund Amendments and F ject to the reporting requirement	Reauthorization Act of 1986 (SARA). This product contains a chemical ts of the Act and Title 40 of the Code of Federal Regulations, Part 372
C	hemical name	SARA 313 - Threshold Values %
Manganes	se sulfate monohydrate 10034-96-5	1.0
Am	monium chloride 12125-02-9	1.0
SARA 311/312 Hazard Ca	tegories	
Acute health hazard		Yes
Chronic Health Hazar	d	Yes
Fire hazard	acuro bazard	No
Reactive Hazard	ssure nazaro	No

<u>CWA (Clean Water Act)</u> 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	Quantities	CWA - Toxic Pollutants	GWA - Priority Pollutants	Substances
---------------	------------	------------------------	---------------------------	------------

# Page 6/7

# V-6281 - COLOR DEVELOPING REAGENT

Manganese sulfate monohydrate 10034-96-5	Not Established	Not Established	Not Established	Not Established
Ammonium chloride 12125-02-9	5000 lb	Not Established	Not Established	X

CERCLA This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Manganese sulfate monohydrate 10034-96-5	-	Not Established	-
Ammonium chloride 12125-02-9	5000 lb	Not Established	RQ 5000 lb final RQ RQ 2270 kg final RQ

# US State Regulations

#### California Proposition 65

Chemical name	California Proposition 65
Manganese sulfate monohydrate 10034-96-5	Not Established
Ammonium chloride 12125-02-9	Not Established

Chemical name	New Jersey	Massachusetts	Pennsylvania
Manganese sulfate monohydrate 10034-96-5	x	Not Established	x
Ammonium chloride 12125-02-9	x	x	x

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

May-29-2015

		16. OTHER INFORM	ATION	
NFPA Health hazard 2	Health hazard 2	Flammability 0 Stability 0	Instability 0	Physical and Chemica Hazards N/A
0				
2	>			
YУ				
Health Hazard	2			
Fire Hazard	0			
Reactivity	0			
Prepared by	Regulate	ory Affairs Department		

Prepared by **Issuing Date** 

Disclaimer

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet

Page 7/7