8101

SB38172
SN32380
1503633
1503634
1503635
1505922

Polypropylene Impact Copolymer

Safety Data Sheet

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

VH#052597

Section 1: Identification

1.1. Product identifier

Product form : Mixture

Product Identifier(s) : Polypropylene Impact Copolymer
Polypropylene
Ethylene-Propylene Copolymer

This MSDS cover prime grades of ethylene-propylene copolymer incluidng but not limited to the follow grades:

4### ABC
5###ABC
GPI##ABC
PPC ####
PPC #####

where # can be any numeric digit (0-9) and ABC may be any combination of letters (the letters may or may not be present).

This MSDS also covers experimental grades which are copolymers including LX3 xx-xx & EOD xx-xx and specially compounded samples labeled Polypropylene Copolymer Nxxxxx and Nxxxxx-x, where x can be any numeric digit (0-9).

CAS No : 9010-79-1

1.2. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Manufacture of plastic articles

1.3. Details of the supplier of the safety data sheet

Total Petrochemicals & Refining USA, Inc.
P O Box 674411
Houston, TX 77267-4411

For non-emergency product information:
Phone: 713-483-5000
Email: product.stewardship@total.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (Toll Free USA & Canada) / 703-527-3887 (Multiple languages)
Total Petrochemicals & Refining USA, Inc.: 1-800-322-3462 (Language: English only)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Combustible Dust

2.2. Label elements

GHS-US labeling

Signal word (GHS-US) : **Warning**

Hazard statements (GHS-US) : **If small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air.**

2.3. Hazards not otherwise classified

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

2.5. Additional information

Based on conditions common to industrial workplace use of this product : Plastic bag or liner may cause a static ignition hazard.
Spilled pellets may create a slipping hazard. Sweep up spillage and dispose of properly.
Skin or eye contact with hot polymer can cause thermal burns.

Processing the polymer at high temperatures may form vapors that irritate the eyes and respiratory tract.

Section 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	CAS No	%
Propylene-Ethylene Copolymer	9010-79-1	>= 98
Additives (chemical identity withheld as a trade secret)	Trade Secret	<= 2

Section 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If necessary seek medical advice.

First-aid measures after skin contact : Gently wash with plenty of soap and water. Heated Material: For serious burns from heated material, get medical attention. In case of skin contact, immediately immerse in or flush with clean, cold water. Do not attempt to remove adhered material from skin.

First-aid measures after eye contact : Rinse eyes with water as a precaution. Obtain medical attention if irritation persists. In case of eye contact with hot material, cool immediately with plenty of water and obtain immediate medical treatment.

First-aid measures after ingestion : Remove material from mouth. Rinse mouth out with water. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : Nuisance dusts can be irritating to the upper respiratory tract. Irritating vapors may form when the polymer is processed at high temperatures.

Symptoms/injuries after skin contact : Contact with skin or eyes with hot material may cause serious thermal burns to skin or eyes.

Symptoms/injuries after eye contact : Dust from this product may cause minor eye irritation. Contact with skin or eyes with hot material may cause serious thermal burns to skin or eyes.

Symptoms/injuries after ingestion : No effects are expected for ingestion of small amounts. May be a choking hazard.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

Section 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : For small fire : Dry chemical. Carbon dioxide. Water. For large fire : Foam. Water spray.

Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the chemical

Fire hazard : May be combustible at high temperature. May form combustible dust concentrations in air. Vapors generated from overheating/melting/decomposition may be flammable and may cause fire/explosion if source of ignition is present.

Explosion hazard : Potential dust explosion hazard. When dust becomes airborne and is exposed to an ignition source, sufficient combustible/flammable dust may exist to burn in the open or explode if confined.

Hazardous decomposition products in case of fire : Carbon oxides (CO, CO2). Aldehydes. Ketones. Hydrocarbons. Fire will produce dense black smoke. Soot.

5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Avoid raising powdered materials into airborne dust, creating an explosion hazard. Apply aqueous extinguishing media carefully to prevent frothing/steam explosion. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

Other information : May re-ignite itself after fire is extinguished.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Emergency procedures for non-emergency personnel : Material creates a slipping hazard on hard surfaces. Clean up spills from walking surfaces immediately.

6.2. Methods and material for containment and cleaning up

Methods for cleaning up : On land, sweep or shovel into suitable containers. Do not allow water contaminated with pellets or powder to enter any waterway, sewer or drain.

Other information : Dispose of contaminated material at an authorized site. Notify authorities if product enters sewers or public waters.

6.3. Reference to other sections

No additional information available

Section 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Do not overheat the product. Avoid contact with heated product to prevent burns.

When handled in bulk quantities, this product and its associated packaging may present a crushing hazard due to the large masses involved, possibly resulting in severe injury or death.

Combustible dust precautions: Handling this product may result in electrostatic accumulation. Use proper grounding procedures. Use only non-sparking tools. Avoid raising powdered material due to explosion hazard. Prevent the build-up of electrostatic charge. The plastic packaging film used to secure bags of material on pallets can also develop static electricity -- remove packaging film in an area free from ignitable vapors/dust.

Processing or material handling equipment may generate dust of sufficiently small particle size, that when suspended in air may be explosive. Dust accumulations should be controlled through a comprehensive dust control program that includes, but is not limited to, source capture, inspection and repair of leaking equipment, routine housekeeping and employee training in hazards. Refer to the latest edition of the National Fire Protection Association (NFPA) 654 publication, "Standard for the Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical, and Plastics Industries", for complete discussion on dust explosion prevention and control measures.

Hygiene measures : Do not eat, drink or smoke when using this product. Keep away from food and drink. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment. Electrostatic charges may be generated when emptying sacks. It is recommended that sacks are emptied away from explosive atmospheres.

Storage conditions : Store at room temperature. Protect from heat and direct sunlight. Store in dry, cool, well-ventilated area.

Incompatible materials : Strong oxidizing agents.

Section 8: Exposure controls/personal protection

8.1. Occupational Exposure Limits

Polypropylene Impact Copolymer (9010-79-1)		
USA ACGIH	ACGIH TWA (mg/m³)	10 mg/m³ (Inhalable fraction) 3 mg/m³ (Respirable Particles)
USA ACGIH	Remark (ACGIH)	Particulates, not otherwise classified

8.2. Exposure controls

Appropriate engineering controls : Provide readily accessible eye wash stations and safety showers. Ensure adequate ventilation. If handling results in dust generation or high temperatures, local exhaust ventilation should be provided to insure that exposure to dust or decomposition products does not exceed the exposure recommended levels.

Hand protection : Use insulated gloves when handling this material hot.

Eye protection : Safety glasses.

Skin and body protection : Wear suitable protective clothing. Safety foot-wear.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Other information : In case of risk of overexposure to dust, vapour or fumes (during product processing), it is recommended that a local exhaust system is placed above the conversion equipment (a fume hood) and the working area must be properly ventilated.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Pellets.

Color	:	Translucent. Opaque.
Odor	:	Paraffin odor.
Odor threshold	:	No data available
pH	:	Not applicable
Relative evaporation rate (butyl acetate=1)	:	Negligible.
Melting point	:	120 - 170 °C
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Relative density	:	No data available
Solubility	:	Water: Negligible.
Log Kow	:	No data available
Viscosity, kinematic	:	Not applicable
Viscosity, dynamic	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information available

Section 10: Stability and reactivity

10.1. Reactivity

Flowing product can create electrical charge, resulting sparks may ignite dust or cause an explosion in some concentration ranges.

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Dust may form explosive mixture in air.

10.4. Conditions to avoid

Avoid dust formation. Avoid the build-up of electrostatic charge. Heat. Open flame. Sparks. Direct sunlight.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Hazardous decomposition products formed under fire conditions: carbon monoxide, carbon dioxide, toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure	:	Inhalation. Ingestion. Skin and eye contact.
Acute toxicity	:	Not classified
Skin corrosion/irritation	:	Not classified
Serious eye damage/irritation	:	Not classified
Respiratory or skin sensitization	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
Specific target organ toxicity (single exposure)	:	Not classified
Specific target organ toxicity (repeated exposure)	:	Not classified

Aspiration hazard : Not classified

Section 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

12.2. Persistence and degradability

Polypropylene Impact Copolymer (9010-79-1)	
Persistence and degradability	This material is persistent in the environment. Not readily biodegradable.
BOD (% of ThOD)	Below detection limit

12.3. Bioaccumulative potential

Polypropylene Impact Copolymer (9010-79-1)	
Bioaccumulative potential	This product is not expected to bioaccumulate through food chains in the environment.

12.4. Mobility in soil

Polypropylene Impact Copolymer (9010-79-1)	
Ecology - soil	low mobility.

12.5. Other adverse effects

Other information : Avoid release to the environment.

Section 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : This product has been evaluated for RCRA characteristics and does not meet the criteria of a hazardous waste if discarded in its purchased form . Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Transfer to a safe disposal area in accordance with federal, state, and local regulations.

Waste disposal recommendations : Recycle the material as far as possible.

Additional information : May be used as fuel in suitably designed installations.

Section 14: Transport information

US Transport (DOT) for Bulk Shipments (Non-Bulk Shipments May Differ)

Not regulated by US DOT

Transport by sea (IMDG)

Not regulated by IMDG

Air transport (IATA)

Not regulated by IATA

Section 15: Regulatory information

15.1. US Federal regulations

Polypropylene Impact Copolymer

TSCA

All components of this product are listed or exempted from listing on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

SARA 313

This product contains no chemicals in excess of the applicable de minimis concentration that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372 (Table 372.65).

SARA Section 311/312 Hazard Classes: Fire hazard

Export Control Classification Number (ECCN): EAR99 (No License Required)

15.2. International regulations

CANADA

Polypropylene Impact Copolymer (9010-79-1)

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

Uncontrolled product according to WHMIS classification criteria

National inventories

No additional information available

15.3. US State regulations

No additional information available

Section 16: Other information

Other information : Acceptable business/technical terms necessary for medical device applications must be developed by contacting your Total Petrochemicals & Refining USA, Inc. sales representative. Without such documented business terms, Total Petrochemicals & Refining USA, Inc. makes no representations and disclaims all warranties, express or implied, concerning biocompatibility and/or suitability of this product for medical device applications.

NFPA (National Fire Protection Association)

NFPA health hazard : 0

NFPA fire hazard : 1

NFPA reactivity : 0

HMIS III Rating

Health : 0

Flammability : 1

Physical Hazard : 0

Personal Protection : See section 8 of SDS

US OSHA LABEL as specified under 29 CFR §1910.1200 (f)

Polypropylene Impact Copolymer

Total Petrochemicals & Refining USA, Inc.
PO Box 674411
Houston, TX 77267-4411 USA
Tel. 713-483-5000 or 1-877-871-2709

Warning

If small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air.

Supplemental Information: Based on conditions common to industrial workplace use of this product

Plastic bag or liner may cause a static ignition hazard.
Spilled pellets may create a slipping hazard. Sweep up spillage and dispose of properly.
Skin or eye contact with hot polymer can cause thermal burns.
Processing the polymer at high temperatures may form vapors that irritate the eyes and respiratory tract.

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Date of issue : May 19, 2015

MSDS ID: PP_CP_IMPACT
SDS REFERENCE NUMBER: PP0013I

SDS Template - TOTAL SDS US (GHS HazCom 2012) TPRI Version 3.01

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SAFETY DATA SHEET

K-RESIN® STYRENE-BUTADIENE COPOLYMERS The Smart Choice™

K-Resin® KR01 Styrene-Butadiene Copolymer

Version 2.0 Revision Date 2015-02-08

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product information

Product Name	:	K-Resin® KR01 Styrene-Butadiene Copolymer
Material	:	1075488, 1076902, 1020931, 1017034, 1020721, 1021128, 1021325, 1021324, 1021323, 1021322, 1021321, 1021320, 1021319, 1021131, 1020929, 1021129, 1021127, 1020934, 1020933, 1020932, 1020930, 1020928, 1034222, 1034223, 1021130
Use	:	Resin
Company	:	Chevron Phillips Chemical Company LP K-Resin® SBC 10001 Six Pines Drive The Woodlands, TX 77380

Emergency telephone:

Health:
866.442.9628 (North America)
1.832.813.4984 (International)
Transport:
North America: CHEMTREC 800.424.9300 or 703.527.3887
Asia: +800 CHEMCALL (+800 2436 2255) China:+86-21-22157316
EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600

Responsible Department	:	Product Safety and Toxicology Group
E-mail address	:	SDS@CPChem.com
Website	:	www.CPChem.com

The manufacturer does not recommend using any K-Resin® SBC grade in medical applications that involve permanent or temporary implantation in the human body.

SECTION 2: Hazards identification

Classification of the substance or mixture

This product has been classified in accordance with the hazard communication standard 29 CFR 1910.1200; the SDS and labels contain all the information as required by the standard.

Emergency Overview

Warning

Form: Pellets **Physical state**: Solid **Color**: Clear to hazy **Odor**: Mild to no odor

OSHA Hazards : Combustible dust

Classification

	:	Combustible dust

Labeling

Signal Word	:	Warning
Hazard Statements	:	May form combustible dust concentrations in air. While this product may not be a combustible dust as sold, further processing or handling may form combustible dust concentration in air.

Potential Health Effects

Physical Hazards	:	Pellets may cause a slip hazard on hard surfaces. Mechanical processing may form combustible dust concentrations in air and thermal processing at elevated temperatures may generate simple hydrocarbons and carbon oxides.
Inhalation	:	Repeated exposure to dust from this material may cause respiratory irritation. Fumes generated during thermal processing may cause irritation of the upper respiratory tract.
Skin	:	Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic response. If this material is heated, thermal burns may result from contact. Thermal burns may include pain or feeling of heat, discolorations, swelling, and blistering.
Eyes	:	Contact with the eyes may cause irritation due to the abrasive action. Not expected to cause prolonged or significant eye irritation. Thermal burns may result if heated material contacts eye.
Ingestion	:	Ingestion of this product is not a likely route of exposure.

Carcinogenicity:

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

SECTION 3: Composition/Information on ingredients

Component	CAS-No.	Weight %
Styrene-Butadiene Copolymer	9003-55-8	95 - 100

SECTION 4: First aid measures

If inhaled : Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion. If symptoms persist, call a physician.

In case of skin contact : If the molten material gets on skin, quickly cool in water. Seek immediate medical attention. Do not try to peel the solidified material from the skin or use solvents or thinners to dissolve it.

In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

If swallowed : Do not induce vomiting without medical advice.

SECTION 5: Firefighting measures

Flash point : No data available

Autoignition temperature : No data available

Suitable extinguishing media : Water. Water mist. Dry chemical. Carbon dioxide (CO2). Foam. If possible, water should be applied as a spray from a fogging nozzle since this is a surface burning material. The application of high velocity water will spread the burning surface layer. Avoid the use of straight streams that may create a dust cloud and the risk of a dust explosion. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards during fire fighting : Risks of ignition followed by flame propagation or secondary explosions can be caused by the accumulation of dust, e.g. on floors and ledges.

Special protective equipment for fire-fighters : Use personal protective equipment. Wear self-contained breathing apparatus for firefighting if necessary.

Further information : This material will burn although it is not easily ignited.

Fire and explosion protection : Treat as a solid that can burn. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Hazardous decomposition products : Simple Hydrocarbons. Carbon oxides.

SECTION 6: Accidental release measures

Personal precautions	:	Sweep up to prevent slipping hazard. Avoid breathing dust.
Environmental precautions	:	Do not contaminate surface water. Prevent product from entering drains.
Methods for cleaning up	:	Clean up promptly by sweeping or vacuum.
Additional advice	:	Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

SECTION 7: Handling and storage

Handling

Advice on safe handling	:	Use good housekeeping for safe handling of the product. Keep out of water sources and sewers. Spilled pellets and powders may create a slipping hazard. Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary, but may not by themselves be sufficient.
Advice on protection against fire and explosion	:	Treat as a solid that can burn. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Storage

Requirements for storage areas and containers	:	Keep in a dry place. Keep in a well-ventilated place.
Advice on common storage	:	Do not store together with oxidizing and self-igniting products.

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

US

Ingredients	Basis	Value	Control parameters	Note
Nuisance Dust	OSHA Z-3	TWA	15 mg/m3	Total dust
	OSHA Z-3	TWA	5 mg/m3	(respirable dust)

Control as Particulate Not Otherwise Classified (PNOC). The ACGIH Guideline* for respirable dust is 3.0 mg/m3 and 10.0 mg/m3 for total dust. The OSHA PEL for respirable dust is 5.0 mg/m3 and 15.0 mg/m3 for total dust.
* This value is for inhalable (total) particulate matter containing no asbestos and < 1.0% crystalline silica.

Engineering measures

Adequate ventilation to control airborned concentrations below the exposure guidelines/limits.

Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal protective equipment

Respiratory protection	:	No personal respiratory protective equipment normally required. If heated material generates vapor or fumes that are not adequately controlled by ventilation, wear a NIOSH approved respirator. Use the following elements for air-purifying respirators: Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection. Dust safety masks are recommended when the dust concentration is excessive.
Eye protection	:	Use of safety glasses with side shields for solid handling is good industrial practice. If this material is heated, wear chemical goggles or safety glasses with side shields or a face shield. If there is potential for dust, use chemical goggles.
Skin and body protection	:	At ambient temperatures use of clean and protective clothing is good industrial practice. If the material is heated or molten, wear thermally insulated, heat-resistant gloves that are able to withstand the temperature of the molten product. If this material is heated, wear insulated clothing to prevent skin contact if engineering controls or work practices are not adequate.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Form	:	Pellets
Physical state	:	Solid
Color	:	Clear to hazy
Odor	:	Mild to no odor
Odor Threshold	:	Not applicable

Safety data

Flash point	:	No data available
Lower explosion limit	:	Not applicable
Upper explosion limit	:	Not applicable
Autoignition temperature	:	No data available
Thermal decomposition	:	Simple Hydrocarbons Carbon oxides

pH	:	Not applicable
Melting point/freezing point	:	Not applicable
Initial boiling point and boiling range	:	Not applicable
Vapor pressure	:	Not applicable
Relative density	:	Not applicable
Density	:	Not applicable
Water solubility	:	Negligible
Partition coefficient: n-octanol/water	:	Not applicable
Solubility in other solvents	:	No data available
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	Not applicable
Relative vapor density	:	Not applicable
Evaporation rate	:	Not applicable
Percent volatile	:	0.2 %

SECTION 10: Stability and reactivity

Reactivity	:	This material is considered non-reactive under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Chemical stability	:	This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Possibility of hazardous reactions

Conditions to avoid	:	Avoid prolonged storage at elevated temperature.
Materials to avoid	:	Avoid contact with strong oxidizing agents.
Thermal decomposition	:	Simple Hydrocarbons, Carbon oxides
Hazardous decomposition products	:	Simple Hydrocarbons Carbon oxides

SECTION 11: Toxicological information

K-Resin® KR01 Styrene-Butadiene Copolymer
Acute oral toxicity : Presumed Not Toxic

K-Resin® KR01 Styrene-Butadiene Copolymer
Acute inhalation toxicity : Presumed Not Toxic

K-Resin® KR01 Styrene-Butadiene Copolymer
Acute dermal toxicity : Presumed Not Toxic

K-Resin® KR01 Styrene-Butadiene Copolymer
Sensitization : Did not cause sensitization on laboratory animals.

SECTION 12: Ecological information

Ecotoxicity effects

Elimination information (persistence and degradability)

Bioaccumulation : Does not bioaccumulate.

Mobility : This product is insoluble in water and has neutral buoyancy. This product may float or sink in water.

Biodegradability : This material is not expected to be readily biodegradable.

Ecotoxicology Assessment

Additional ecological information : This material is not expected to be harmful to aquatic organisms., Fish or birds may eat pellets which may obstruct their digestive tracts.

SECTION 13: Disposal considerations

The information in this SDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

SECTION 14: Transport information

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

National legislation

SARA 311/312 Hazards	:	No SARA Hazards
SARA 302 Reportable Quantity	:	This material does not contain any components with a SARA 302 RQ.
SARA 302 Threshold Planning Quantity	:	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 304 Reportable Quantity	:	This material does not contain any components with a section 304 EHS RQ.

SARA 313 Ingredients : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

Ozone-Depletion Potential : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

US State Regulations

Pennsylvania Right To Know : No components are subject to the Pennsylvania Right to Know Act.

New Jersey Right To Know : No components are subject to the New Jersey Right to Know Act.

California Prop. 65 Ingredients : This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

Notification status

Europe REACH : On the inventory, or in compliance with the inventory

United States of America TSCA	:	On the inventory, or in compliance with the inventory
Canada DSL	:	On the inventory, or in compliance with the inventory
Australia AICS	:	On the inventory, or in compliance with the inventory
New Zealand NZIoC	:	On the inventory, or in compliance with the inventory
Japan ENCS	:	On the inventory, or in compliance with the inventory
Korea KECI	:	On the inventory, or in compliance with the inventory
Philippines PICCS	:	On the inventory, or in compliance with the inventory
China IECSC	:	On the inventory, or in compliance with the inventory

SECTION 16: Other information

NFPA Classification : Health Hazard: 0
Fire Hazard: 1
Reactivity Hazard: 0

Further information

Legacy SDS Number : 248900

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

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

Key or legend to abbreviations and acronyms used in the safety data sheet			
ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances

MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		

1. Product and Company Identification

1.1. Product identifier

Trade name : **ACRYLITE® Acrylic Molding and Extrusion Compounds**

Polymethylmethacrylate; PMMA

1.2. Recommended use of the chemical and restrictions on use

Recommended use(s): molding compound for injection molding and extrusion

Non-recommended use(s): None known.

1.3. Details of the supplier of the safety data sheet

Evonik CYRO LLC
299 Jefferson Road
Parsippany, NJ 07054-0677
+1-973-929-8000

Product Information Number 1-207-490-4242
24 Hour Emergency Number, CHEMTREC 1-800-424-9300

2. Hazards identification

2.1. Classification of the substance or mixture

This mixture is not classified according to US-GHS.

Classification according to Regulation 29CFR 1910.1200

This product is not considered to be a hazardous substance or mixture when classified in accordance with Regulation 29 CFR 1910.1200 (US GHS).

2.2. Label elements

This mixture is not classified according to US-GHS.

2.3. Other hazards

Dust explosions are generally to be expected with dust-forming organic products.

3. Composition/information on ingredients

3.1. Substances

—

3.2. Mixtures

Hazardous Ingredients

Component	CAS-No.	Content	Hazard class / Hazard category / Hazard statement

acrylic copolymer	trade secret	> 95.0 %	not classified

4. First-aid measures

4.1. Description of first aid measures

General advice	No special measures are required.
Inhalation	No specific treatment is necessary since this material is not likely to be hazardous by inhalation.
Skin contact	After contact with melted product cool quickly with cold water. See a physician.
Eye contact	If mechanical irritation occurs flush eyes thoroughly with a large amount of water, consult a physician if irritation persists.
Ingestion	Ingestion is not considered a potential route of exposure.

4.2. Most important symptoms and effects, both acute and delayed

No hazards known.

4.3. Indication of any immediate medical attention and special treatment needed

None known

5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media	foam, dry chemical, carbon dioxide, water spray
Unsuitable extinguishing media	full water jet

5.2. Specific hazards arising from the chemical

In case of fire partly flammable, partly harmful vapours, which are irritating to the eyes and respiratory system, may be formed on thermal decomposition.

5.3. Special protective equipment and precautions for fire-fighters

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

Use water spray to cool containers exposed to fire.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid dust formation.

Danger of slipping after spill or leakage. Assure sufficient ventilation. Keep away sources of ignition.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and materials for containment and cleaning up

Collect material and place in a disposal container. Obey relevant local, state, provincial and federal laws and regulations.

6.4. Reference to other sections

For personal protection see section 8.

7. Handling and storage

7.1. Precautions for safe handling

Safe handling advice	Avoid dust formation. During thermoplastic processing, vapours of the decomposition products referred to in section 10 are given off, which are technically unavoidable (Observe exposure threshold limit values). During thermal processing and/or machining local exhaust ventilation at processing machines is recommended.
Advice on protection against fire and explosion	Take precautionary measures against static discharges. In the event of fire, cool the endangered product with water.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	Store in a dry place.

8. Exposure controls/personal protection

8.1. Control parameters

Exposure Limit Information

ACRYLIC COPOLYMER trade secret

Occupational Exposure Values			Remark(s):
ACGIH TLV-TWA			not established
ACGIH TLV-STEL			not established
OSHA PEL-TWA			not established
OSHA PEL-STEL			not established
NIOSH REL-TWA			not established
NIOSH REL-STEL			not established

DUST, PARTICULATES)

Occupational Exposure Values			Remark(s):
ACGIH TLV-TWA			not established
ACGIH TLV-STEL			not established
OSHA PEL-TWA	50 mppcf		(total dust)
OSHA PEL-TWA	15 mppcf		(respirable dust)
OSHA PEL-STEL			not established
OEL-TWA (Alberta)		10 mg/m3	(total dust)
OEL-TWA (Alberta)		3 mg/m3	(respirable dust)
OEL-STEL (Alberta)			not established
OEL-TWA (British Columbia)		3 mg/m3	(respirable dust)
OEL-TWA (British Columbia)		10 mg/m3	(total dust)
OEL-STEL (British Columbia)			not established
OEL-TWA (Ontario)		10 mg/m3	(inhalable)
OEL-TWA (Ontario)		3 mg/m3	(respirable)
OEL-TWA (Quebec)		10 mg/m3	(total dust)
OEL-STEL (Quebec)			not established
OEL-TWA (Mexico)		10 mg/m3	(total dust)
OEL-STEL (Mexico)			not established

8.2. Exposure controls

Engineering controls

If use operations generate dust, use adequate ventilation.

8.3. Personal protective equipment

Protective measures	A safety shower and eye wash fountain should be readily available. To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.
Hygiene measures	Follow the usual good standards of occupational hygiene. Clean skin thoroughly after work; apply skin cream. Use skin protective preparation as preventive skin protection.
Respiratory protection	A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.
Hand protection	protective gloves against mechanical risks according to EN 388
General information	Gloves should be replaced regularly, especially after extended contact with the product. For each work-place a suitable glove type has to be selected.
Eye protection	Use safety glasses (ANSI Z87.1 or approved equivalent).

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Colour	colourless or coloured
Form	Pellets
Odor	odourless
Odour Threshold	no data available
physical state	solid
Melting point/freezing point	Softening Temperature ca. 108 °C 226 °F
Boiling point/range	no data available
Flash point	> 250 °C (ASTM D 1929-68) > 482 °F (ASTM D 1929-68)
Evaporation rate	no data available
Ignition temperature	no data available
Autoignition temperature	> 400 °C > 752 °F
Decomposition temperature	This product is stable under normal storage conditions. No decomposition if stored and applied as directed. Depolymerization begins at 250 °C / 482 °F.
Impact Sensitivity	no data available
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Flammability (solid, gas)	no data available
Vapour pressure	not applicable
Density	1.19 g/cm3 at 20 °C / 68 °F

Relative density	no data available
Bulk density	ca. 700 kg/m3 (20 °C)
Relative vapour density (related to air)	not applicable
Solubility in water	insoluble
Solubility (quantitative)	no data available
Solubility (qualitative)	in e.g. esters, ketones and chlorinated hydrocarbons: readily soluble
pH	not applicable
n-Octanol/water partition coefficient	no data available
Viscosity (dynamic)	no data available
Viscosity (kinematic)	no data available

9.2. Other information

Dust explosions are generally to be expected with dust-forming organic products.

10. Stability and reactivity

10.1. Reactivity

see section 10.2.

10.2. Chemical stability

This product is stable under normal storage conditions.No decomposition if stored and applied as directed.Depolymerization begins at 250 °C / 482 °F.

10.3. Possibility of hazardous reactions

Product will not undergo polymerization.

10.4. Conditions to avoid

High temperature.This material is considered stable.

10.5. Incompatible materials

No known incompatibility with other materials.

10.6. Hazardous decomposition products

In case of thermal decomposition, combustible vapours are formed, which are irritating to eyes and respiratory system, mainly consisting of: methyl methacrylate

11. Toxicological information

11.1. Information on toxicological effects

toxicokinetics, metabolism and distribution	The substance is practically not bioavailable (structure-activity-relationships) (analogy)
Acute Oral Toxicity	no specific test data available no evidence for hazardous properties (structure-activity-relationships) (analogy)
Caustic burning / irritation of skin	no specific test data available no evidence for hazardous properties (structure-activity-relationships) (analogy)
Serious eye damage/eye irritation	no specific test data available no evidence for hazardous properties (structure-activity-relationships) (analogy)
Respiratory/skin sensitization	no specific test data available no evidence for hazardous properties (structure-activity-relationships) (analogy)
Aspiration hazard	no specific test data available no evidence for hazardous properties (structure-activity-relationships) (analogy)
Mutagenicity assessment	no specific test data available no evidence for hazardous properties (structure-activity-relationships) (analogy)
Carcinogenicity	no specific test data available no evidence for hazardous properties (structure-activity-relationships) (analogy)
Reprotoxicity / teratogenicity	no specific test data available no evidence for hazardous properties (structure-activity-relationships) (analogy)

CMR assessment	CMR: no no specific test data available (structure-activity-relationships) (analogy)
Specific Target Organ Toxicity - Single exposure	no specific test data available no evidence for hazardous properties (structure-activity-relationships) (analogy)
Specific Target Organ Toxicity - Repeated exposure	no specific test data available no evidence for hazardous properties (structure-activity-relationships) (analogy)
General information	The product has not been tested toxicologically. When handled and used as directed the product will not cause hazardous effects to health according to studies on similar products and practical experience. The fine particles contained in the product may cause mechanical irritations of the skin, eyes and mucous membranes. Avoid skin and eye contact and inhalation of product dust/aerosols.

12. Ecological information

12.1. Toxicity

Hazardous to the aquatic environment	no specific test data available no evidence for hazardous properties (structure-activity-relationships) (analogy)

12.2. Persistence and degradability

Persistence and degradability	no specific test data available no evidence for hazardous properties (structure-activity-relationships) (analogy)

12.3. Bioaccumulative potential

Bioaccumulation	no specific test data available no evidence for hazardous properties (structure-activity-relationships) (analogy)

12.4. Mobility in soil

Mobility	no specific test data available no evidence for hazardous properties (structure-activity-relationships) (analogy)

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment	PBT: no vPvB: no

12.6. Other adverse effects

General Information	The product has not been tested ecotoxicologically. On the basis of the products consistency as well as its low water solubility a bioavailability is unlikely. Studies on products with similar composition confirm this assumption. Prevent substance from entering soil, natural bodies of water and sewer systems.

13. Disposal considerations

13.1. Waste treatment methods

Product	Waste must be disposed of in accordance with federal, state and local regulations. Incineration is the preferred method. CYRO encourages the recycle, recovery and reuse of materials, where permitted, as an alternate to disposal as a waste.
Uncleaned packaging	Contaminated packaging should ideally be emptied; it can then be recycled after having been decontaminated. Packaging that cannot be cleaned should be disposed of professionally. Uncontaminated packaging may be taken for recycling.

14. Transport information

US DOT Hazard Classification
Not subject to the regulations on dangerous goods.

Canadian TDG Classification
Not subject to the regulations on dangerous goods.

Shipment by sea IMDG/GGVSee
Not dangerous according to transport regulations.

Air transport ICAO/IATA
Not dangerous according to transport regulations.

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

INVENTORY INFORMATION

REACH (EU)	preregistered, registered or exempted
TSCA (USA)	listed or exempted
DSL (CDN)	listed or exempted

US FEDERAL REGULATORY INFORMATION

Component / CASRN	TPQ [lbs]	CERCLA RQ [lbs] (40CFR302.4)	SARA 302 List of EHS	SARA 313 (40CFR372)	TSCA 12b

NONE

COMPONENT CLASSIFICATION UNDER CLEAN AIR ACT SECTION 112

Component / CASRN	Weight %	HAP	EHAP
NONE			

PRODUCT CLASSIFICATION UNDER SECTION 311/312 OF SARA (40CFR370)

NONE

US STATE REGULATORY INFORMATION

Component / CASRN	New Jersey RTK	Pennsylvania RTK	Massachusetts RTK	California Proposition 65 Cancer	California Proposition 65 Reproductive
acrylic polymer / trade secret	NO	NO	NO	NO	NO

CANADIAN REGULATION

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation and the MSDS contains all information required by the Controlled Products Regulations.

This is a non-controlled product.
WHMIS:NO

Component / CASRN	NPRI
NONE	

16. Other information

	Health	Flammability	Physical Hazard
HMIS-Ratings	1	1	0
NFPA-Ratings	1	1	0

HMIS Hazard Ratings	NFPA Hazard Ratings
4 = severe	4 = extreme
3 = serious	3 = high
2 = moderate	2 = moderate
1 = slight	1 = slight
0 = minimal	0 = insignificant
N = no rating for powders	N = no rating for powders
* = chronic health hazard	

Other information none

References	relevant manuals and publications own examinations own toxicological and ecotoxicological studies toxicological and ecotoxicological studies of other manufacturers SIAR OECD-SIDS RTK public files
Revision Date	05/18/2015

Places marked by || have been amended from the last version.

Date of printing : 06/18/2015

Legend

ACC	American Chemistry Council
ACGIH	American Conference of Governmental Industrial Hygenists
ACS	Advisory Committee on Sustainability
ADI	Acceptable Daily Intake
ASTM	American Society for Testing and Materials
ATP	Adaptation to Technical Progress
BCF	Bioconcentration factor
BOD	Biochemical oxygen demand
c.c.	closed cup
CAO	Cargo Aircraft Only
Carc	Carcinogen
CAS	Chemical Abstract Services
CDN	Canada
CEPA	Canadian Environmental Protection Act
CERCLA	Comprehensive Environmental Response – Compensation and Liability Act
CFR	Code of Federal Regulations
CMR	carcinogenic-mutagenic-toxic for reproduction
COD	Chemical oxygen demand
DIN	German Institute for Standardization
DMEL	Derived minimum effect level
DNEL	Derived no effect level
DOT	Department of Transportation
EC50	half maximal effective concentration
EPA	Environmental Protection Agency
ErC50	Reduction of Growth Rate
ERG	Emergency Response Guide Book
FDA	Food and Drug Administration
GHS	Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
GLP	Good Laboratory Practice
GMO	Genetic Modified Organism
HCS	Hazard Communication Standard
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	Intermediate Bulk Container
ICAO-TI	International Civil Aviation Organization- Technical Instructions
ICCA	International Council of Chemical Association
ID	identification number
IMDG	International Maritime Dangerous Goods
IUPAC	International Union of Pure and Applied Chemistry
ISO	International Organization For Standardization
LC50	50 % Lethal Concentration
LD50	50 % Lethal Dose
L(E)C50	LC50 or EC50
LOAEL	Lowest observed adverse effect level
LOEL	Lowest observed effect level
MARPOL	International Convention for the Prevention of Pollution from Ships
NFPA	National Fire Protection Association
NOAEL	No observed adverse effect level
NOEC	no observed effect concentration
NOEL	no observed effect level
o. c.	open cup
OECD	Organisation for Economic Cooperation and Development
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration
PBT	Persistent, bioaccumulative, toxic
PEC	Predicted effect concentration
PNEC	Predicted no effect concentration
RQ	Reportable Quantity
SDS	Safety Data Sheet
STOT	Specific Target Organ Toxicity
UN	United Nations
vPvB	very persistent, very bioaccumulative
voc	volatile organic compounds
WHMIS	Workplace Hazardous Materials Information System
WHO	World Health Organization