

Entropy Resins® KNT Thickened Adhesive Resin

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Date of issue: 01/31/2018

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Version: CER-KNT-2023B

SECTION 1: Identification

Identification

Product form : Mixture
Product name : Entropy Resins® KNT Thickened Adhesive Resin
Product code : CER-KNT-D
Chemical family : Epoxy resin mixture

Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Adhesive resin for composites

Details of the supplier of the safety data sheet

Manufacturer

Gougeon Brothers, Inc
100 Patterson Ave.
Bay City, MI 48706 - U.S.A.
T 888-377-6738 or 989-684-7286

Emergency telephone number

Emergency number : CHEMTREC 1 (800) 424-9300
CHEMTREC International +1 (703) 527-3887 24 hr

SECTION 2: Hazard identification

Classification of the substance or mixture

Skin Irrit. 2
Eye Irrit. 2A
Skin Sens. 1
Aquatic Chronic 2

Label elements

Hazard pictograms (GHS)



GHS07

GHS09

Signal word (GHS)

Warning

Hazard statements (GHS)

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Toxic to aquatic life with long lasting effects.

Precautionary statements (GHS)

Avoid breathing dust/fume/gas/mist/vapours/spray. Wash hands, forearms and face thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. If on skin: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Collect spillage. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

Other hazards

No additional information available

Unknown acute toxicity

Not applicable

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SECTION 3: Composition/information on ingredients

Substances

Not applicable

Mixtures

Name	Product identifier	%
Bisphenol A-epichlorohydrin polymer	(CAS-No.) 25068-38-6	80 - 100
Dimethyl silicone polymer with silica	(CAS-No.) 67762-90-7	1 - 5
Silica, amorphous, fumed, crystalline-free	(CAS-No.) 112945-52-5	1 - 5
Oxirane, 2,2-[(2,2-dimethyl-1,3-propanediyl)bis(oxyethylene)]bis-	(CAS-No.) 17557-23-2	1 - 5

The exact chemical identity and/or exact percentage (concentration) of each ingredient may be held as confidential business information (CBI). Any ingredient not disclosed in this section may have been determined not to be hazardous to health or the environment, or it may be present at a level below its disclosure threshold.

SECTION 4: First-aid measures

Description of first aid measures

- First-aid measures after inhalation** : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
- First-aid measures after skin contact** : IF ON SKIN: Wash with plenty of Water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact** : 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.
- First-aid measures after ingestion** : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

Most important symptoms and effects, both acute and delayed

- Symptoms/effects after inhalation** : May cause irritation to the respiratory tract.
- Symptoms/effects after skin contact** : Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. May cause an allergic skin reaction.
- Symptoms/effects after eye contact** : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
- Symptoms/effects after ingestion** : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Indication of any immediate medical attention and special treatment needed

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Foam. Carbon dioxide. Dry chemical.
- Unsuitable extinguishing media** : Do not use a heavy water stream.

Special hazards arising from the substance or mixture

- Fire hazard** : Products of combustion may include, and are not limited to: oxides of carbon. Phenolics.
- Reactivity** : No dangerous reactions known under normal conditions of use.

Advice for firefighters

- Firefighting instructions** : Under fire conditions closed containers may rupture or explode.
- Protection during firefighting** : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

- General measures** : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

For non-emergency personnel

No additional information available

For emergency responders

No additional information available

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Environmental precautions

Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and material for containment and cleaning up

- For containment** : Stop leak if safe to do so. Absorb and/or contain spill with inert material (sand, vermiculite or other appropriate material), then place in suitable container. Do not flush into surface water or sewer system. Wear recommended personal protective equipment.
- Methods for cleaning up** : Sweep or shovel spills into appropriate container for disposal. Warm, soapy water or non-flammable, safe solvent may be used to clean residual. Provide ventilation.

Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

Precautions for safe handling

- Precautions for safe handling** : Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Provide adequate ventilation. When mixed with epoxy resin this product causes an exothermic reaction, which in large masses, can produce enough heat to damage or ignite surrounding materials and emit fumes and vapors that vary widely in composition and toxicity.
- Hygiene measures** : Wash contaminated clothing before reuse. Always wash hands after handling the product.

Conditions for safe storage, including any incompatibilities

- Storage conditions** : Keep out of the reach of children. Keep container tightly closed. Store in dry, cool, well-ventilated area. Avoid high temperatures. Protect from moisture.
- Storage temperature** : 40 - 120 °F / 4 - 49 °C

SECTION 8: Exposure controls/personal protection

Control parameters

Bisphenol A-epichlorohydrin polymer (25068-38-6)		
Not applicable		
Dimethyl silicone polymer with silica (67762-90-7)		
ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³ inhalable 3 mg/m ³ respirable fraction
OSHA	OSHA PEL (TWA) (mg/m ³)	6 mg/m ³ Amorphous silica 15 mg/m ³ Total dust 5 mg/m ³ respirable fraction
Oxirane, 2,2'-[(2,2-dimethyl-1,3-propanediyl)bis(oxymethylene)]bis- (17557-23-2)		
Not applicable		
Silica, amorphous, fumed, crystalline-free (112945-52-5)		
ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³ (Inhalable) 3 mg/m ³ (Respirable)
OSHA	OSHA PEL (TWA) (mg/m ³)	6 mg/m ³ (Amorphous silica) 15 mg/m ³ (Total dust) 5 mg/m ³ (Respirable fraction)

Exposure controls

- Appropriate engineering controls** : Ensure good ventilation of the work station.
- Hand protection** : Wear suitable gloves resistant to chemical penetration.
- Eye protection** : Wear eye/face protection.
- Skin and body protection** : Wear suitable protective clothing.
- Respiratory protection** : In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Environmental exposure controls** : Avoid release to the environment.
- Other information** : Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

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SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Gel
Colour	: Yellow
Odour	: Mild
Odour threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: > 400 °F / 204 °C Estimated based on ingredient data.
Flash point	: > 200 °F / 93 °C Based on ASTM D92 test results from similar product.
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Not flammable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: < 1 mmHg @ 68 °F / 20°C Estimated based on ingredient data.
Relative density (water = 1)	: 1.19
Solubility	: No data available
Partition coefficient n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: Gel
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

Other information

VOC content	: ASTM D 2369-07 was used to determine the Volatile Content of mixed epoxy resin and hardener. Refer to the hardener SDS for information about the total volatile content of the resin/hardener system.
Bulk density	: 9.91 lb/gal (1.19 kg/L)

SECTION 10: Stability and reactivity

Reactivity	: No dangerous reactions known under normal conditions of use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use. A mass of more than one pound of product plus an aliphatic amine will cause irreversible polymerization with significant heat buildup. Strong acids, bases, amines and mercaptans can cause polymerization.
Conditions to avoid	: Heat. Incompatible materials. On heating, there is a risk of bursting due to internal pressure build-up.
Incompatible materials	: Amines. Mercaptans. Strong acids. Strong bases.
Hazardous decomposition products	: May include, and are not limited to: oxides of carbon. Phenolics.

SECTION 11: Toxicological information

Information on toxicological effects

Bisphenol A-epichlorohydrin polymer (25068-38-6)	
LD50 oral rat	> 15000 mg/kg
LD50 dermal rabbit	> 230000 mg/kg

Dimethyl silicone polymer with silica (67762-90-7)	
LD50 oral rat	> 5000 mg/kg OECD 401
LD50 dermal rabbit	> 2000 mg/kg OECD 402

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Oxirane, 2,2'-[(2,2-dimethyl-1,3-propanediyl)bis(oxymethylene)]bis- (17557-23-2)	
LD50 oral rat	4500 mg/kg
LD50 dermal rabbit	> 2000 mg/kg

Silica, amorphous, fumed, crystalline-free (112945-52-5)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg

Acute toxicity (oral)	: Not classified.
Acute toxicity (dermal)	: Not classified.
Acute toxicity (inhalation)	: Not classified.
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified.
Carcinogenicity	: Not classified.

Silica, amorphous, fumed, crystalline-free (112945-52-5)	
IARC group	3 - Not classifiable

Reproductive toxicity	: Not classified.
STOT-single exposure	: Not classified.
STOT-repeated exposure	: Not classified.
Aspiration hazard	: Not classified.
Symptoms/effects after inhalation	: May cause irritation to the respiratory tract.
Symptoms/effects after skin contact	: Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Symptoms/effects after ingestion	: May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

Toxicity

Ecology - general	: Toxic to aquatic life with long lasting effects.
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Persistence and degradability

KNT Resin	
Persistence and degradability	Not established.

Bioaccumulative potential

KNT Resin	
Bioaccumulative potential	Not established.

Mobility in soil

No additional information available

Other adverse effects

Other information	: No other effects known.
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Name	Product identifier	Ecotoxicity Classification Information
Bisphenol A-epichlorohydrin polymer	(CAS-No.) 25068-38-6	Aquatic Chronic Cat. 2
Dimethyl silicone polymer with silica	(CAS-No.) 67762-90-7	Not Classified
Silica, amorphous, fumed, crystalline-free	(CAS-No.) 112945-52-5	Not Classified
Oxirane, 2,2'-[(2,2-dimethyl-1,3-propanediyl)bis(oxymethylene)]bis-	(CAS-No.) 17557-23-2	Not Classified

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SECTION 13: Disposal considerations

Waste treatment methods

Product/Packaging disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

SECTION 14: Transport information

Department of Transportation (DOT) and Transportation of Dangerous Goods (TDG)

In accordance with DOT/TDG

Not regulated

Transport by sea

In accordance with IMDG

UN-No. (IMDG) : 3077
Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Proper Shipping Name - Addition : Epoxy resin
Class (IMDG) : 9 - Miscellaneous dangerous substances and articles
Packing group (IMDG) : III
EmS-No. (1) : F-A, S-F
Marine pollutant : Yes

Transport by air

In accordance with IATA

UN-No. (IATA) : 3077
Proper Shipping Name (IATA) : Environmentally hazardous substance, solid, n.o.s.
Proper Shipping Name - Addition : Epoxy resin
Class (IATA) : 9 - Miscellaneous Dangerous Goods
Packing group (IATA) : III
Marine pollutant : Yes

SECTION 15: Regulatory information

Federal regulations

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

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

Bisphenol A-epichlorohydrin polymer (25068-38-6)	
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
Dimethyl silicone polymer with silica (67762-90-7)	
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
Oxirane, 2,2'-[(2,2-dimethyl-1,3-propanediyl)bis(oxymethylene)]bis- (17557-23-2)	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a final TSCA section 4 test rule.
Epichlorohydrin (106-89-8)	
Listed on the United States SARA Section 302 Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	100 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 lb
SARA Section 313 - Emission Reporting	0.1 %

International regulations


No additional information available

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US State regulations

 **WARNING:** This product can expose you to Epichlorohydrin, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Epichlorohydrin (106-89-8)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Date of issue : 01/31/2018
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Other information : None.

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