Entropy Resins®
HVA Compression Molding Hardener

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: 11/30/2018 Revision date: 10/18/2023 Version: EH-HVA-2023b

SECTION 1: Identification

Identification

Product form : Mixture

Product name : Entropy Resins® HVA Compression Molding Hardener

Product code : CEH-2QT, CEH-HVA-5GAL, CEH-HVA-HD, CEH-HVA-D, CEH-HVA-T

Chemical family : Polyamidoamine mixture

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

Recommended use : Curing agent for epoxy resins

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

Distributor

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 Corr. 1C
Eye Dam. 1
Skin Sens. 1
Aquatic Chronic 2

Label elements

Hazard pictograms (GHS) :

GHS05 GHS07 GHS09

Signal word (GHS) :

Danger

Hazard statements (GHS) :

Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Toxic to aquatic life with long lasting effects.

Precautionary statements (GHS) :

Do not breathe 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 swallowed: rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. 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/doctor. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Collect spillage. Store locked up. 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

SECTION 3: Composition/information on ingredients

Substances

Not applicable

Mixtures

Name	Product identifier	%
Fatty acids, C18-unsaturated, dimers, polymers with tall-oil fatty acids and triethylenetetramine	(CAS-No.) 68082-29-1	95 - 100

The concentrations listed represent actual ranges that result from batch variability.

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 inhaled: Remove person to fresh air and keep comfortable for breathing. Get medical attention if irritation develops and persists.

First-aid measures after skin contact : If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Take off contaminated clothing and wash it before reuse. Immediately call a POISON CENTER/doctor.

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. Immediately call a POISON CENTER/doctor.

First-aid measures after ingestion : IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Immediately call a POISON CENTER/doctor.

Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : May cause irritation to the respiratory tract. May cause burns to the respiratory tract.

Symptoms/effects after skin contact : Causes severe skin burns. Symptoms may include redness, pain, blisters. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.

Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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. Sand. Limestone powder.

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. Nitrogen oxides. Amines. Ammonia. Nitric acid. Aldehydes. Cyanides. Nitrosamines. When mixed with sawdust, wood chips, or other cellulosic material, spontaneous combustion can occur under certain conditions. Heat is generated as the air oxidizes the amine. If the heat is not dissipated quickly enough, it can ignite the sawdust.

Reactivity : No dangerous reactions known under normal conditions of use.

Advice for firefighters

Firefighting instructions : Do not allow run-off from fire-fighting to enter drains or water courses.

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

Other information : Use of water may generate toxic aqueous solutions.

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

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. Do not use sawdust or other combustible material to absorb spilled material.

Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Wash with soapy water. 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 : Do not get in eyes, on skin, or on clothing. Do not breathe vapors or mists from heated material. Avoid breathing vapour or mist. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Provide adequate ventilation. Wear personal protective equipment. 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. Store locked up. Protect from sunlight.

Storage temperature : 40 - 90 °F / 4 - 32 °C

SECTION 8: Exposure controls/personal protection

Control parameters

Fatty acids, C18-unsaturated, dimers, polymers with tall-oil fatty acids and triethylenetetramine (68082-29-1)
Not applicable

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.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Highly viscous.

Colour : Caramel

Odour : Ammoniacal

Odour threshold : No data available

pH	: 11 - 12 Estimated based on ingredient data
Melting point	: No data available
Freezing point	: No data available
Boiling point	: > 400 °F / 204 °C
Flash point	: > 200 °F / 93 °C Estimated based on similar product
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Not flammable
Vapour pressure	: < 1 mm Hg @ 68 °F / 20 °C
Relative vapour density at 20 °C	: No data available
Relative density (water = 1)	: 0.96
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	: 10000 mm²/s @ 77 °F / 25 °C
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. The combined VOC content for the resin and hardener system is listed below. 300 / HVA: 0.00 g/L ; 0.00 lbs./gal
Bulk density	: 7.99 lb/gal (0.96 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 epoxy resin will cause irreversible polymerization with significant heat buildup and pressure. Heating will cause a rise in pressure with a risk of bursting.
Conditions to avoid	: Heat. Incompatible materials.
Incompatible materials	: Acids. Oxidizing materials. Halogenated compounds. Nitrous oxide. Nitrous acid. Nitrites. Sodium hypochlorite. Peroxides.
Hazardous decomposition products	: May include, and are not limited to: oxides of carbon. Toxic fumes. Toxic gases. Nitrogen oxides. Amines. Ammonia. Nitric acid. Nitrosamines.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity (oral)	: Not classified.
Acute toxicity (dermal)	: Not classified.
Acute toxicity (inhalation)	: Not classified.
Skin corrosion/irritation	: Causes severe skin burns. pH: 11 - 12 Estimated based on ingredient data
Serious eye damage/irritation	: Causes serious eye damage. pH: 11 - 12 Estimated based on ingredient data
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified.
Carcinogenicity	: Not classified.
Reproductive toxicity	: Not classified.
STOT-single exposure	: Not classified.
STOT-repeated exposure	: Not classified.
Aspiration hazard	: Not classified.

HVA Hardener	
Viscosity, kinematic (calculated value)	10000 mm²/s @ 77 °F / 25 °C

Symptoms/effects after inhalation : May cause irritation to the respiratory tract. May cause burns to the respiratory tract.

Symptoms/effects after skin contact : Causes severe skin burns. Symptoms may include redness, pain, blisters. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.

Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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.

Persistence and degradability

HVA Hardener	
Persistence and degradability	Not established.

Bioaccumulative potential

HVA Hardener	
Bioaccumulative potential	Not established.

Mobility in soil

No additional information available.

Other adverse effects

Other information : No other effects known.

Name	Product identifier	Ecotoxicity Classification Information
Fatty acids, C18-unsaturated, dimers, polymers with tall-oil fatty acids and triethylenetetramine	(CAS-No.) 68082-29-1	Aquatic Chronic Cat. 2

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

UN-No.(DOT/TDG) : UN3267

Proper Shipping Name (DOT/TDG) : Corrosive liquid, basic, organic, n.o.s.

Proper Shipping Name - Addition : Polyamidoamine

Class (DOT/TDG) : 8 - Class 8 - Corrosive material 49 CFR 173.136

Packing group (DOT/TDG) : III

Transport by sea

In accordance with IMDG

UN-No. (IMDG) : 3267

Proper Shipping Name (IMDG) : CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.

Proper Shipping Name - Addition : Polyamidoamine

Class (IMDG) : 8 - Corrosive substances

Packing group (IMDG) : III

EmS-No. (1)	: F-A, S-B
Marine pollutant	: Yes

Transport by air

In accordance with IATA

UN-No. (IATA)	: 3267
Proper Shipping Name (IATA)	: Corrosive liquid, basic, organic, n.o.s.
Proper Shipping Name - Addition	: Polyamidoamine
Class (IATA)	: 8 - Corrosives
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.

Fatty acids, C18-unsaturated, dimers, polymers with tall-oil fatty acids and triethylenetetramine **(68082-29-1)**	
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).

International regulations

No additional information available.

US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

Date of issue	: 11/30/2018
Revision date	: 10/18/2023
Version	: CEH-HVA-2023a
Other information	: None.

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