

Material Safety Data Sheet

Star Technology Inc.

FORMULATING - INNOVATIVE - SOLUTIONS

Revision 1

Prepared 2012-10-16

Section 1 - Chemical Product and Company Identification

Product Name: Epoxy Resin

Product Code: AC-22-5A

TradeName(s): AC-22-5A

Manufactured by:
Star Technology, Inc.
200 Executive Drive
Waterloo, Indiana 46793
USA

For Information call: 260-837-7833
Chemtrec: 1-800-424-9300
International Chemtrec: 703-527-3887

Section 2 Hazard Identification

EU Risk Phrases

R36/38: Irritating to eyes and skin

R42/43: May cause sensitization by inhalation and skin contact

EU Safety Phrases

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S36: Wear suitable protective clothing

GHS Ratings

Acute dermal toxicity	Acute Tox. 4
Eye corrosive	2A
Skin sensitizer	1
Organ toxin repeated exposure	2

GHS Hazards

H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation

GHS Precautions

P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection



Hazardous chemicals may enter the body by:

Inhalation Skin Contact Eye Contact Ingestion

Chemical Exposure may effect the following organs:

Kidneys Skin

Acute Toxicity: Not Established

Effects of Overexposure, Epoxy Resin:

Prolonged inhalation of crystalline silica may result in silicosis, a disabling pulmonary fibrosis characterized by fibrotic changes and miliary nodules in the lungs, a dry cough,

Effects of Overexposure, Epoxy Resin:

shortness of breath, emphysema, decreased chest expansion, and increased susceptibility to tuberculosis. In advanced stages, loss of appetite, pleuritic pain, and total incapacity to work. Advanced silicosis may result in death due to cardiac failure or destruction of lung tissue. Crystalline silica is classified as group 1 "known to be carcinogenic to humans" by IARC and "sufficient evidence" of carcinogenicity by the NTP. The chronic health risks are associated with respirable particles of 3-4 um over protracted periods of time. Currently, there is a limited understanding of the mechanisms of quartz toxicity, including its mechanisms for lung carcinogenicity. Additional studies are needed to determine whether the cell transforming activity of quartz is related to its carcinogenic potential. Primary irritation, Allergic Sensitization, and irritation of the respiratory tract.

Carcinogenicity: The following chemical(s) comprise 0.1% or more of this mixture and are listed and/or classified as carcinogens or potential carcinogens by NTP, IARC, OSHA or ACGIH:

SILICA (CRYSTALLINE): This product contains crystalline silica (CS), which is considered a hazard by inhalation. IARC has classified inhalation of CS as a carcinogen for humans (Group 1). CS is listed by NTP as a known

human carcinogen. Inhalation of CS is also a known cause of silicosis, a noncancerous lung disease.

Conditions Aggravated: Not Established

Chronic Effects: Not Established

Section 3 - Composition, Information on Ingredients

Chemical Name / CAS No	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
DGEBA Epoxy Resin 25068-38-6	N/E	N/E	
TGMDA			
SILICA (CRYSTALLINE) 14808-60-7	TWA 0.1 mg/m3	TWA 0.025 mg/m3	
MODIFIED BISPHENOLA EPOXY RESIN	N/E	N/E	

Section 4 - First Aid Measure

Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. Get medical aid.

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medical aid.

Skin: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

Ingestion: Never give anything by mouth to an unconscious person. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupful of water. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

Flash Point: > 250 C (>482 F)

Autoignition: Not Established

LEL: N/A

UEL: N/A

Extinguishing Media: Use a fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

Unusual Fire or Explosion Hazards: Unknown

Hazardous Combustion Products: See section 10 for a list of hazardous decomposition products for this mixture.

Fire Fighting: If evacuation of personnel is necessary, evacuate to an upwind area.

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Containers may explode when heated.

Section 6 - Accidental Release Measures

Spill and Leak Procedure: Spill Supervisor-Ensure cleanup personnel wear appropriate Personal Protective Equipment (PPE), including respiratory protection. Remove all ignition sources. Keep nonessential personnel away from the contaminated area.

Small Spill: Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section. After removal, flush spill area with soap and water to remove trace residue.

Large Spill: Prevent material from entering sewers and watercourses by diking or impounding the spill material. Advise authorities if the product has entered or may enter sewers, watercourse or extensive land areas. Ventilate the contaminated area. Use non sparking tools, mix the appropriate sorbent into the spill material. Use an absorbent like sawdust for aqueous, waterborne, and solvent-borne coatings. Collect the saturated sorbent and transfer it into a covered container. Steel containers are acceptable for all wastes except wastes which contain acids. Use suitable plastic container for acid bearing wastes. Label the waste container. Dispose of the waste in compliance with all Federal, state, regional and local regulations

Section 7 - Handling and Storage

Handling Precautions: Wear all appropriate Personal Protective Equipment (PPE). Wear respiratory protection or ensure adequate ventilation at all times as vapors can accumulate in confined or poorly ventilated areas. Use the product in a manner which minimizes splashes and/or the creation of dust. Keep container closed when not in use. Do not handle or store material near heat, sparks, open flames, or other sources of ignition. Store at room temperature. (72 to 80 F)

Storage: Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use.

Regulatory Requirements: None Listed.

Section 8 - Exposure Control and Personal Protection

Engineering Controls: Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.

Ventilation: Use only with adequate ventilation, i.e., ventilation in compliance with occupational exposure limits.

Administrative Controls: Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product.

EYE/FACE PROTECTION: Use chemical goggles.

SKIN PROTECTION Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, gloves, boots, apron, or full-body suit will depend on operation. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air-purifying respirator equipped with an organic vapor sorbent and a particle filter. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (airline or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply.

Contaminated Equipment: Dispose of the waste in compliance with all Federal, State, regional and local regulations.

Section 9 - Physical and Chemical Properties

AC-22-5A typically exhibits the following properties under normal circumstances:

Appearance	Viscous Liquid
Odor	Typical Epoxy
Physical State	Liquid

Vapor Density	Heavier than air
Evaporation Rate	Slower than ether
Specific Gravity (SG)	1.154

Section 10 - Stability and Reactivity

Stability:

Stable

Materials to Avoid:

Hydrogen fluoride

Strong acids, Strong bases, Strong oxidizers, Amines

Hazardous Decomposition Products:

Hazardous decomposition products formed under fire conditions. - silicon oxides

Carbon monoxide, carbon dioxide, chlorine compounds, hydrocarbons of indeterminate nature.

Hazardous polymerization will not occur.

Section 11 - Toxicological Information

Toxicological information: There is no toxicological data established for AC-22-5A

Section 12 - Ecological Information

Potential Effect on Environment: May cause harm to aquatic organisms. Do not allow to enter drains, sewers or watercourses.

Section 13 - Disposal Consideration

Waste Disposal Method: Cure (harden, set, or react) the product according to product instructions. Dispose of completely cured (or polymerized) wastes in a sanitary landfill. Incinerate uncured product in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility. As the US EPA, state, regional and other regulatory agencies may have jurisdiction over the disposal of your facility's hazardous waste; it is incumbent upon the hazardous waste generator to learn of and satisfy all the requirements which affect you. Dispose of the hazardous waste at a properly licensed and permitted site or facility. Ensure conformity to all applicable waste disposal regulations. The US EPA Hazardous Waste Numbers which follow are applicable to this unadulterated product if the product enters the "waste stream". Refer to Title 40 of the Code of Federal Regulations, Part 261 (40CFR261). This part of the Code identifies solid wastes which are subject to regulations under various sections of the Code and which are subject to the notification requirements of Sections 3010 of the Resource Conservation and Recovery Act (RCRA):

Section 14 - Transportation Information

This material is classified for transportation as follows:

<u>Agency</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT	Not Regulated			

Section 15 - Regulatory Information

Additional regulatory listings, where applicable:

Toxic Substance Control Act (TSCA): All chemicals except those listed below appear in the Toxic Substance Control Act Chemical Substance Inventory:

TGMDA

Section 313 of Title III of the Superfund and Reauthorization Act of 1986 (SARA). The products listed below are subject to the reporting requirements of the Act, and Title 40 of the Code of Federal Regulations part 372:

Section 16 - Additional Information

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;\red0\green0\blue0;} \viewkind4\uc1\pard\cf1\fs20 HMIS Classification:\cf0 H:2 F:1 R:0 \par \cf1 NFPA Rating:\cf0 H:2 F:1
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To the best of our knowledge, the information contained herein is accurate. However, Star Technology, Inc. does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.