



MSDS: 0013258
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MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: HYE or HMF 934/ Carbon Prepreg
Synonyms: Cycom 934/Carbon Prepreg
Chemical Family: Epoxy
Molecular Formula: Mixture
Molecular Weight: Mixture

CYTEC INDUSTRIES INC., FIVE GARRET MOUNTAIN PLAZA, WEST PATERSON, NEW JERSEY 07424, USA
For Product Information call 1-800/652-6013. Outside the USA and Canada call 1-973/357-3193.
EMERGENCY PHONE: For emergency involving spill, leak, fire, exposure or accident call CHEMTREC: 1-800/424-9300. Outside the USA and Canada call 1-703/527-3887.

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2. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA REGULATED COMPONENTS

Component / CAS No.	% (w/w)	OSHA (PEL):	ACGIH (TLV)	Carcinogen NTP IARC - 2A
Glycidol 556-52-5	0.1-1	50 ppm	2 ppm	-
Carbon Fiber 7440-44-0	70	3 fibers/cc (Cytec)	Not Established	-
Aromatic Glycidyl Ester -	7 - 13	Not Established	Not Established	-
Acetone 67-64-1	1-5	1000 ppm	500 ppm 750 ppm STEL	-
Aniline derivative -	15 - 40	Not Established	Not Established	-
Aromatic glycidyl derivative #2 -	15 - 40	Not Established	Not Established	-

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE AND ODOR:

Color: black
Appearance: resin coated fibers or fabric
Odor: slight characteristic

STATEMENTS OF HAZARD:

WARNING! MAY CAUSE ALLERGIC SKIN REACTION
ELECTRICALLY CONDUCTIVE FIBERS - AIRBORNE FIBERS CAN SHORT CIRCUIT
ELECTRICAL EQUIPMENT

CHRONIC HAZARD WARNING:

CONTAINS MATERIALS WHICH CAUSED CANCER IN LABORATORY ANIMAL TESTS
Risk of cancer depends on duration and level of exposure

POTENTIAL HEALTH EFFECTS**EFFECTS OF OVEREXPOSURE:**

The acute dermal (rabbit) LD50 value is estimated to be greater than 2000 mg/kg. Based on the physical form of this product, overexposure by the oral or inhalation route is unlikely. Repeated or prolonged dermal contact may cause allergic skin reactions. Refer to Section 11 for toxicology information on the regulated components of this product.

4. FIRST AID MEASURES**Ingestion:**

Not an expected route of exposure.

Skin Contact:

Wash immediately with plenty of water and soap. Remove contaminated clothing and shoes without delay. Obtain medical attention. Do not reuse contaminated clothing without laundering. Destroy or thoroughly clean shoes before reuse.

Eye Contact:

Not an expected route of exposure.

Inhalation:

Not an expected route of exposure.

5. FIRE-FIGHTING MEASURES**Extinguishing Media:**

Use water spray or fog, carbon dioxide or dry chemical.

Protective Equipment:

Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See Section 8 (Exposure Controls/Personal Protection).

6. ACCIDENTAL RELEASE MEASURES**Personal Precautions:**

Where exposure level is not known, wear approved, positive pressure, self-contained respirator. Where exposure level is known, wear approved respirator suitable for level of exposure. Refer to Section 8 (Exposure Controls/Personal Protection) for appropriate personal protective equipment.

Methods For Cleaning Up:

Sweep up into containers for disposal. Flush spill area with water.

7. HANDLING AND STORAGE

HANDLING

Precautionary Measures: Avoid prolonged or repeated contact with skin. Avoid contact with eyes. Wash thoroughly after handling. Keep container closed. Do not let fibers come in contact with electrical equipment.

Handling Statements: Heating or curing of unused rolls or sheets of product prior to disposal is not recommended. Heating a large mass of product can lead to a rapid decomposition reaction, generating heat, smoke and possibly fire. This material contains a small amount of flammable or combustible liquid and vapor. Keep away from heat, sparks, and flame. Airborne fibers are electrically conductive and should not come in contact with electrical equipment. Maintain good housekeeping to control fiber or dust accumulations.

STORAGE

None

Storage Temperature: Store at <-12 °C 10 °F

Reason: Integrity

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures:

Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure when spraying or curing at elevated temperatures.

Respiratory Protection:

Where exposures are below the established exposure limit, no respiratory protection is required. Where exposures exceed the established exposure limit, use respiratory protection recommended for the material and level of exposure. A full facepiece respirator also provides eye and face protection. Cutting, grinding or sanding of parts fabricated after curing may create respirable dust particles. Respiratory protection appropriate for this dust may be required. Refer to components listed above for potential hazardous components in the dust.

Eye Protection:

Wear eye/face protection such as chemical splash proof goggles or face shield. Eyewash equipment and safety shower should be provided in areas of potential exposure.

Skin Protection:

Avoid skin contact. Wear impermeable gloves and suitable protective clothing. Barrier creams may be used in conjunction with the gloves to provide additional skin protection. Since this product is absorbed through the skin, care must be taken to prevent skin contact and contamination of clothing.

Additional Advice:

Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water. It is recommended that a shower be taken after completion of workshift especially if significant contact has occurred. Work clothing should then be laundered prior to reuse. Street clothing should be stored separately from work clothing and protective equipment. Work clothing and shoes should not be taken home.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color: black

Appearance: resin coated fibers or fabric

Odor:	slight characteristic
Boiling Point:	Not applicable
Melting Point:	Not applicable
Vapor Pressure:	Not applicable
Specific Gravity:	Not available
Vapor Density:	Not applicable
Percent Volatile (By Wt.):	0 - 3
pH:	Not applicable
Saturation In Air (% By Vol.):	Not applicable
Evaporation Rate:	Not applicable
Solubility In Water:	Not available
Volatile Organic Content:	Not applicable
Flash Point:	Not applicable
Flammable Limits (% By Vol):	Not applicable
Autoignition Temperature:	Not available
Decomposition Temperature:	Not available
Partition coefficient (n-octanol/water):	Not available
Odor Threshold:	See Section 2 for exposure limits.

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions To Avoid:	None known
Polymerization:	Will not occur
Conditions To Avoid:	None known
Materials To Avoid:	Strong acids, bases, oxidizing agents.
Hazardous Decomposition Products:	smoke acid vapors and fumes hydrocarbons oxides of carbon oxides of nitrogen

11. TOXICOLOGICAL INFORMATION

Toxicological information for the product is found under Section 3. HAZARDS IDENTIFICATION. Toxicological information on the regulated components of this product is as follows:

Carbon dust can be mildly irritating to the lungs; however, acute overexposure is not expected to cause adverse health effects.

Carbon fibers may cause mechanical irritation of the eyes, skin, nose and throat. Airborne carbon fibers are not considered respirable. A typical carbon fiber may be characterized as having a diameter of 5-7 microns and a length greater than 100 microns. Fibers with diameters greater than 3.5 microns are not considered respirable.

Aromatic glycidyl derivative #2 has acute oral (rat) and dermal (rabbit) LD50 values of > 10,000 mg/kg and >3000 mg/kg, respectively. Direct contact with this material can cause mild eye and skin irritation. This material caused skin sensitization in guinea pigs and humans. This material was found to be mutagenic in the Ames test and the mouse lymphoma test, but was negative in other mutagenicity tests including the cell transformation test. This material demonstrated in vivo mutagenic activity in a mouse Micronucleus test. In another study with rats, the LD50 was reported to be >5,000 mg/kg. This compound caused severe eye irritation in one laboratory animal test and mild eye irritation in other tests.

Aniline derivative has acute oral (rat) and dermal (rabbit) LD50 values of >600 mg/kg and greater than 4000 mg/kg, respectively. An acute oral (mouse) LD50 value of 250 mg/kg has also been reported. In laboratory animal tests, this material did not cause primary skin irritation. However, contact with the material can cause severe allergic skin reaction. Overexposure may also cause sore throat, headache, weakness, and possibly methemoglobinemia or other blood disorders. In lifetime feeding studies no evidence of carcinogenicity was seen in mice of either sex or female rats. However, male rats were observed to have a increased incidence of mesenchymal tumors of the spleen. This material was not mutagenic to Salmonella typhimurium. This material adversely affected reproductive potency in male rats. This material is reported to have shown positive results in in vitro mutagenicity tests with human cell cultures. Subacute ingestion caused liver damage in laboratory animals.

Aromatic glycidyl ester has acute oral (rat) and dermal (rabbit) values of >500 mg/kg and >2000 mg/kg respectively. This material causes moderate skin and severe eye irritation. Aromatic glycidyl ester may cause skin sensitization.

Acetone has acute oral (rat) and dermal (rabbit) LD50 values of 5.8 g/kg and 20 g/kg, respectively. The LC50 (rat) for acetone vapor after a four hour exposure is 16,000 ppm (37.95 mg/L). Chronic overexposure to vapor may cause dryness of mouth, headache, dizziness, nausea, and loss of coordination. Liquid acetone is severely irritating to the eyes and mildly irritating to the skin. Repeated dermal application of acetone produced cataracts in the eyes of laboratory animals. High concentrations of acetone caused fetotoxic effects in laboratory animals tests. Acetone has shown positive results in in vitro screening tests for mutagenicity.

Glycidol (CAS# 556-52-5) has acute oral (rat) and dermal (rabbit) LD50 values of 420 mg/kg and 1980 mg/kg, respectively. The 4 hr acute inhalation (rat) LC50 is 580 ppm. This material is readily absorbed through the skin and can cause severe irritation to the mucous membranes, upper respiratory tract, eyes, and skin. Direct contact with this material may cause skin sensitization and dermatitis on prolonged exposure. Inhalation overexposure may cause CNS depression. Glycidol was mutagenic in a variety of in vitro and in vivo short-term tests. Mutagenic activity was observed in the Ames Test, in the mouse lymphoma assay and the incidence of micronucleated polychromatic erythrocytes was increased in the Mouse Micronucleus Assay. This material was demonstrated to produce clear evidence of carcinogenic activity in male and female rats and mice when test by NTP. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans.

California Proposition 65 Warning (applicable in California only) - This product contains (a) chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm.

12. ECOLOGICAL INFORMATION

Environmental exposure from substances of this preparation are limited due to the physical form of the product. This material is not classified as dangerous for the environment.

13. DISPOSAL CONSIDERATIONS

The information on RCRA waste classification and disposal methodology provided below applies only to the Cytec product, as supplied. If the material has been altered or contaminated, or it has exceeded its recommended shelf life, the guidance may be inapplicable. Hazardous waste classification under federal regulations (40 CFR Part 261 et seq) is dependent upon whether a material is a RCRA `listed hazardous waste` or has any of the four RCRA `hazardous waste characteristics.` Refer to 40 CFR Part 261.33 to determine if a given material to be disposed of is a RCRA `listed hazardous waste`; information contained in Section 15 of this MSDS is not intended to indicate if the product is a `listed hazardous waste.` RCRA Hazardous Waste Characteristics: There are four characteristics defined in 40 CFR Section 261.21-61.24: Ignitability, Corrosivity, Reactivity, and Toxicity. To determine Ignitability, see Section 9 of this MSDS (flash point). For Corrosivity, see Sections 9 and 14 (pH and DOT corrosivity). For Reactivity, see Section 10 (incompatible materials). For Toxicity, see Section 2 (composition). Federal regulations are subject to change. State and local requirements, which may differ from or be more stringent than the federal regulations, may also apply to the classification of the material if it is to be disposed. Cytec encourages the recycle, recovery and reuse of materials, where permitted, as an alternate to disposal as a waste. Cytec recommends that organic materials classified as RCRA hazardous wastes be disposed of by thermal treatment or incineration at EPA approved facilities. Cytec has provided the foregoing for information only; the person generating the waste is responsible for determining the waste classification and disposal method.

14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

US DOT

Proper Shipping Name: Not applicable/Not regulated
Hazardous Substances:
Not applicable

TRANSPORT CANADA

Proper Shipping Name: Not applicable/Not regulated

ICAO / IATA

Proper Shipping Name: Not applicable/Not regulated
Packing Instructions/Maximum Net Quantity Per Package:
Passenger Aircraft: -
Cargo Aircraft: -

IMO

Proper Shipping Name: Not applicable/Not regulated

15. REGULATORY INFORMATION

INVENTORY INFORMATION

United States (USA): All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.

Canada: All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the DSL.

European Union (EU): All components of this product are included on the European Inventory of Existing Chemical Substances (EINECS) or are not required to be listed on EINECS.

China: All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

OTHER ENVIRONMENTAL INFORMATION

The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste disposal of this product.

This product does not contain any components regulated under these sections of the EPA

PRODUCT HAZARD CLASSIFICATION UNDER SECTION 311 OF SARA

- Acute
- Chronic

16. OTHER INFORMATION

NFPA Hazard Rating (National Fire Protection Association)

Health: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

Fire: 1 - Materials that must be preheated before ignition can occur.

Reactivity: 0 - Materials that in themselves are normally stable, even under fire exposure conditions.

Reasons For Issue: Revised Section 15

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