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MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: EASYPOXY® K-22 Part A Adhesive
Synonyms: None
Chemical Family: Mixture of epoxy resins and fillers
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 (24 hours/day) - For emergency involving spill, leak, fire, exposure or accident call:

Asia Pacific Region:

Australia - +61-3-9663-2130 or 1800-033-111
China (PRC) - +86(0)532-8388-9090 (NRCC)
New Guinea - +61-3-9663-2130
New Zealand - +61-3-9663-2130 or 0800-734-607
All Others - +65-633-44-177 (CareChem24 Singapore)

Canada: 1-905-356-8310 (Cytec Welland, Canada plant)

Europe/Africa/Middle East: +44-(0)208-762-8322 (CareChem24 UK)

Latin America:

Brazil - 0800 0111 767 (SOS Cotec)
Chile - +56-2-247-3600 (CITUC QUIMICO)
All Others - +52-376-73 74122 (Cytec Atequiza, Mexico plant)

USA: +1-703-527-3887 or 1-800-424-9300 (CHEMTREC)

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2. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA REGULATED COMPONENTS

Component / CAS No.	% (w/w)	OSHA (PEL):	ACGIH (TLV):	Carcinogen
o-Cresol glycidyl ether 2210-79-9	1 - 5	Not established	Not established	-
Silica, quartz 14808-60-7	15 - 40	0.1 mg/m ³ (respirable dust) (250)/(%SiO ₂ + 5) mppcf TWA (respirable) (10)/(%SiO ₂ + 2) mg/m ³ TWA (respirable) (30)/(%SiO ₂ + 2) mg/m ³ TWA (total dust)	0.025 mg/m ³ (TWA)	IARC 1 NTP ACGIH A2

Component / CAS No.	% (w/w)	OSHA (PEL):	ACGIH (TLV):	Carcinogen
Silica, amorphous 7631-86-9	1 - 5	5 mg/m ³ Respirable fraction. (PEL) 15 mg/m ³ Total dust. (PEL) 5 mg/m ³ Respirable fraction. (TWA) 15 mg/m ³ Total dust. (TWA)	10 mg/m ³ Inhalable particles. (TWA) 3 mg/m ³ Respirable particles. (TWA) 0.1 mg/m ³	-
Diglycidyl ether bisphenol A resin #2 25085-99-8	60 - 85	Not established	Not established	-

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE AND ODOR:

Color: black
Appearance: paste
Odor: characteristic

STATEMENTS OF HAZARD:

WARNING! MAY CAUSE ALLERGIC SKIN REACTION
MAY CAUSE EYE IRRITATION

CHRONIC HAZARD WARNING:

CHRONIC TOXICITY AND CANCER HAZARD
CONTAINS MATERIAL WHICH MAY CAUSE LUNG DAMAGE AND CANCER.
Risk depends on duration and level of exposure

POTENTIAL HEALTH EFFECTS

EFFECTS OF EXPOSURE:

The estimated acute oral (rat) LD50, acute dermal (rabbit) LD50 and 4-hour inhalation (rat) LC50 values for this material are >4,800 mg/kg, >2,000 mg/kg and >20 mg/L, respectively.

Allergic skin reactions or primary skin irritation may be produced by prolonged or repeated dermal contact with epoxy resins. Direct contact with this material may cause mild eye and skin irritation. Exposure to vapor during heat curing may cause irritation or injury of the respiratory tract and eye irritation. Refer to Section 11 for toxicology information on the regulated components of this product.

4. FIRST AID MEASURES

Ingestion:

If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

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:

Rinse immediately with plenty of water for at least 15 minutes.

Inhalation:

Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Use water spray, carbon dioxide or dry chemical.

Protective Equipment:

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

Special Hazards:

Keep containers cool by spraying with water if exposed to fire.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Where exposure level is known, wear approved respirator suitable for level of exposure. Where exposure level is not known, wear approved, positive pressure, self-contained respirator. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear impermeable boots.

Methods For Cleaning Up:

Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush spill area with water.

Environmental Precautions:

Use appropriate containment to avoid environmental contamination.

7. HANDLING AND STORAGE

HANDLING

Precautionary Measures: Avoid prolonged or repeated contact with skin. Avoid contact with eyes. Wash thoroughly after handling.

Special Handling Statements: None

STORAGE

None

Storage Temperature: Room temperature

Reason: Quality.

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.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	black
Appearance:	paste
Odor:	characteristic
Boiling Point:	Not available
Melting Point:	Not available
Vapor Pressure:	Not available
Specific Gravity/Density:	1.28
Vapor Density:	Not available
Percent Volatile (% by wt.):	Not available
pH:	Not applicable
Saturation In Air (% By Vol.):	Not available
Evaporation Rate:	<1
Solubility In Water:	Not available
Volatile Organic Content:	Not applicable
Flash Point:	>93 °C 200 °F Tag Closed Cup
Flammable Limits (% By Vol):	Not available
Autoignition Temperature:	Not available
Decomposition Temperature:	Not available
Partition coefficient (n-octanol/water):	Not available
Odor Threshold:	Not available

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions To Avoid:	Avoid excess heating over long periods of time.
Polymerization:	May occur
Conditions To Avoid:	Avoid contact with acids, oxidizing agents, bases or amines.
Hazardous Decomposition Products:	Carbon monoxide (CO) Carbon dioxide 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:

Quartz silica (respirable fraction) can cause reduced pulmonary function when inhaled. Exposure to respirable quartz silica can cause delayed (chronic) fibrosis and other lung injury. Chronic inhalation exposure showed that quartz silica can cause lung cancer in rats but not in mice. There is also limited human evidence which shows an association of lung cancer with occupational exposure to quartz silica. This material is reported to have shown positive results in in vitro mutagenicity tests with human cell cultures. Studies have shown that tobacco smoking and high quartz silica exposure exhibit a synergistic effect for lung cancer. Silica, crystalline is a chemical known to the State of California to cause cancer.

o-Cresyl glycidyl ether has an oral LD50 (rat) value of 2500 mg/kg and a dermal LD50 (rabbit) value of 2300 mg/kg. This material is irritating to eyes and skin. Liquid may cause skin sensitization. Inhalation of vapors may cause CNS depression and irritation to the nose, throat and respiratory tract.

Diglycidyl ether of bisphenol A resin #2 has acute oral (rat) and dermal (rabbit) LD50 values of > 5000 mg/kg and 20,000 mg/kg, respectively. Direct contact with this material may cause mild eye and skin irritation and has caused allergic skin reactions. This material is reported to have produced mutagenic effects in yeast and cultured mammalian cells both with and without metabolic activation. Chronic ingestion of a similar resin caused reduced weight gain and death in laboratory animals. The literature reports three cases of asthmatic symptoms developing in workers due to occupational exposure to this resin.

Amorphous silica has oral (rat) LD50 values ranging from 3160 mg/kg to >7500 mg/kg. The acute 4-hour inhalation LC50 (rat) is greater than the maximum attainable concentration of 0.25 mg/L. Exposure to synthetic amorphous silica dust by inhalation, absorption or ingestion is not expected to cause adverse effects. Some studies report that long term inhalation exposure to amorphous silica has caused lung effects in laboratory animals. Amorphous silica does not cause the lung diseases that crystalline silica is known to form.

California Proposition 65 Warning (applicable in California only) - This product contains (a) chemical(s) known to the State of California to cause cancer.

12. ECOLOGICAL INFORMATION

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The ecological assessment for this material is based on an evaluation of its components.

Predicted to be not readily biodegradable.

13. DISPOSAL CONSIDERATIONS

13. DISPOSAL CONSIDERATIONS

The information on RCRA waste classification and disposal methodology provided below applies only to the 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. The Company encourages the recycle, recovery and reuse of materials, where permitted, as an alternate to disposal as a waste. The Company recommends that organic materials classified as RCRA hazardous wastes be disposed of by thermal treatment or incineration at EPA approved facilities. The Company 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: Environmentally hazardous substance, liquid, n.o.s.

Hazard Class: 9

Packing Group: III

UN/ID Number: UN3082

Transport Label Required: Miscellaneous
 Marine Pollutant

Technical Name (N.O.S.): diglycidyl ether bisphenol A resin

Hazardous Substances:

Not applicable

Comments: Marine Pollutants - DOT requirements specific to Marine Pollutants do not apply to non-bulk packagings transported by motor vehicles, rail cars or aircraft.

TRANSPORT CANADA

Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.

Hazard Class: 9

Packing Group: III

UN Number: UN3082

Transport Label Required: Miscellaneous
 Marine Pollutant

Technical Name (N.O.S.): diglycidyl ether bisphenol A resin

ICAO / IATA

Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.

Hazard Class: 9

Packing Group: III

UN Number: UN3082

Transport Label Required: Miscellaneous

Packing Instructions/Maximum Net Quantity Per Package:

 Passenger Aircraft: 914; 450 L

 Cargo Aircraft: 914; 450 L

Technical Name (N.O.S.): diglycidyl ether bisphenol A resin

Comments: Special Provision A97 states that substances classified as UN3077 or UN3082 by the regulations of other modes of transport may also be transported by air under these entries. This classification does NOT apply if the regulations of the other modes of transport allow the substances to be shipped as "Non-Dangerous Goods" because of package size or transport mode.

IMO

Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.
Hazard Class: 9
UN Number: UN3082
Packing Group: III
Transport Label Required: Miscellaneous
Marine Pollutant
Technical Name (N.O.S.): diglycidyl ether bisphenol A resin

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.

Australia: All components of this product are included in the Australian Inventory of Chemical Substances (AICS) or are not required to be listed on AICS.

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

Japan: All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese inventory.

Korea: All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean inventory.

Philippines: All components of this product are included on the Philippine (PICCS) inventory or are not required to be listed on the Philippine 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.

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

Reasons For Issue:

Revised Section 14

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