



APCEPO85C - EPOXY RESIN PART B

PRODUCT AND COMPANY IDENTIFICATION: Date of Issue: Oct 2012

Product name : APCEPO85C B

Product Use Description : Epoxy Curing Agent

COMPOSITION/INFORMATION ON INGREDIENTS

Components CAS Number Concentration

(Weight) Benzyl alcohol 100-51-6 40% - 70 %

Isophoronediamine (IPD) 2855-13-2 10% - 30 % Cycloaliphatic amine 15% - 40 %

CHEMICAL FAMILY: Cycloaliphatic Amine.

HAZARDS IDENTIFICATION

Emergency Overview

Corrosive.

Components of the product may affect the nervous system.

Severe eye irritant.

Severe respiratory irritant.

May cause sensitization by skin contact.

Potential Health Effects

Inhalation: Harmful if inhaled and may cause delayed lung injury. Can cause severe eye, skin and respiratory tract burns. Risk of serious damage to the lungs (by inhalation). May cause nose, throat, and lung irritation. Inhalation of aerosol may cause irritation to the upper respiratory tract. May cause central nervous system effects, such as headache, nausea, dizziness, confusion, breathing difficulties. Severe cases of overexposure can result in respiratory failure. Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system.

Eye contact: Corneal edema may give rise to a perception of "blue haze" or "fog" around lights. Exposed individuals may see rings around bright lights. This effect is temporary and has no known residual effect. Product vapor can cause glaucopsia (corneal edema) when absorbed into the tissue of the eye from the atmosphere. Causes eye burns. May cause blindness. Severe eye irritation.



Skin contact: Causes skin burns. If absorbed through the skin, may cause central nervous system effects, such as headache, nausea, dizziness, confusion, breathing difficulties.

Ingestion: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Chronic Health Hazard: This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. May cause allergic skin reaction.

Exposure Guidelines

Target Organs :

- Skin.
- Eyes.
- Respiratory system.
- Central nervous system.

Symptoms: Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause sore throat.

Aggravated Medical Condition

Eye disease Skin disorders and Allergies. Asthma. Neurological disorders

FIRST AID MEASURES

General advice: Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.

Eye contact: Hold eyelids apart, initiate and maintain gentle and continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour.

Skin contact: Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Initiate and maintain gentle and continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour. Cover wound with sterile dressing.

Take off contaminated clothing and shoes immediately.

NOTE TO PHYSICIANS: Application of corticosteroid cream has been effective in treating skin irritation.



Ingestion: Do not induce vomiting without medical advice. If a person vomits when lying on his back, place him in the recovery position. Never give anything by mouth to an unconscious person. Prevent aspiration of vomit. Turn victim's head to the side.

Inhalation: If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately. Move to fresh air.

FIRE – FIGHTING MEASURES

Suitable extinguishing media: Alcohol-resistant foam.

Carbon dioxide (CO₂).

Dry chemical.

Dry sand.

Limestone powder.

Specific hazards: Incomplete combustion may form carbon monoxide. May generate ammonia gas. May generate toxic nitrogen oxide gases. Burning produces noxious and toxic fumes. Downwind personnel must be evacuated. Special protective equipment for fire-fighters: Avoid contact with the skin. A face shield should be worn. Use personal protective equipment. Wear self-contained breathing apparatus for firefighting if necessary.

Further information: Do not allow run-off from firefighting to enter drains or water courses. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

ACCIDENTAL RELEASE MEASURES

Personal precautions Wear suitable protective clothing, gloves and eye/face protection. Use self-contained breathing apparatus and chemically protective clothing. Evacuate personnel to safe areas.

Environmental precautions: Construct a dike to prevent spreading.

Methods for cleaning up: Contact Air Products' Emergency Response Centre for advice. Approach suspected leak areas with caution. Place in appropriate chemical waste container.

Additional advice: Open enclosed spaces to outside atmosphere. If possible, stop flow of product.



HANDLING AND STORAGE

Handling

Use only in well-ventilated areas. Avoid breathing vapors and/or aerosols. Avoid contact with skin and eyes. Avoid contact with eyes. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. Use personal protective equipment. When using, do not eat, drink or smoke.

Storage

Do not store near acids. Keep containers tightly closed in a dry, cool and well-ventilated place.

EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures

Provide readily accessible eye wash stations and safety showers. Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits.

Personal protective equipment

Respiratory protection: Wear appropriate respirator when ventilation is inadequate.

Hand protection Butyl-rubber

Nitrile rubber.

Neoprene gloves.

Impervious gloves.

PVC disposable gloves

The breakthrough time of the selected glove(s) must be greater than the intended use period.

Eye protection Full face shield with goggles underneath.

Chemical resistant goggles must be worn.

Skin and body protection Impervious clothing.

Full rubber suit (rain gear).

Rubber or plastic boots.

Slicker Suit.

Environmental exposure controls: Construct a dike to prevent spreading.

Special instructions for protection and hygiene: Discard contaminated leather articles. Provide readily accessible eye wash stations and safety showers. Wash at the end of each work shift and before eating, smoking or using the toilet.

Exposure limit(s)

Benzyl alcohol Time Weighted Average (TWA): WEEL 10 ppm 44.2 mg/m³



PHYSICAL AND CHEMICAL PROPERTIES

Form: Liquid.

Color Colorless.

Odor Ammoniacal.

Relative density : 1.03 (water = 1)

Vapor pressure < 10.34 mmHg at 21 °C

Density : 64.301 lb/ft³ (1.03 g/cm³) at 70 °F (21 °C)

pH : Boiling point/range : 401 °F (205 °C)

Flash point : 96 °C

Water solubility : < 0.1 g/l

STABILITY AND REACTIVITY

Stability: Stable under normal conditions.

Materials to avoid Reactive metals (e.g. sodium, calcium, zinc etc.).

Materials reactive with hydroxyl compounds.

Organic acids (i.e. acetic acid, citric acid etc.).

Mineral acids.

Sodium hypochlorite.

Product slowly corrodes copper, aluminium, zinc and galvanized surfaces.

Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion.

Oxidizing agents.

Hazardous decomposition products:

Nitric acid.

Ammonia.

Nitrogen oxides (NO_x).

Nitrogen oxide can react with water vapors to form corrosive nitric acid.

Carbon monoxide.

Carbon dioxide (CO₂).

Aldehydes.

Flammable hydrocarbon fragments (e.g., acetylene).



TOXICOLOGICAL INFORMATION

Acute Health Hazard

Ingestion: LD50 : 2,369 mg/kg

Species: Rat.

Inhalation: No data is available on the product itself.

Inhalation - Components

Benzyl alcohol LC50 (4 h) : > 4.178
mg/IOECD Test Guideline 403

Species: Rat.

Skin: LD50 : > 2,000 mg/kg

Species: Rabbit.

Method: Estimated.

Eye irritation/corrosion: Severe eye irritation. Risk of serious damage to eyes.

Acute dermal irritation/corrosion: Corrosive to the skin of a rabbit.

Chronic Health Hazard

Rats exposed orally to 800 mg/kg benzyl alcohol for thirteen weeks exhibited CNS depression and histopathological changes in the brain, thymus and skeletal muscles. The No Observed Adverse Effect Level (NOAEL) was 400 mg/kg. No evidence of carcinogenicity was seen in a two-year study with rats and mice.

ECOLOGICAL INFORMATION

Eco toxicity effects

Aquatic toxicity: No data is available on the product itself.

Toxicity to fish - Components

Benzyl alcohol LC50 (96 h): 10 mg/l Species: Bluegill sunfish (*Lepomis macrochirus*).

Benzyl alcohol LC50 (96 h): 460 mg/l Species: Fathead minnow (*Pimephales promelas*).

Toxicity to algae - Components

Benzyl alcohol IC50 (72 h): 700 mg/l Species: Algae.

Toxicity to other organisms: No data available.

Persistence and degradability

Mobility: No data available.

Bioaccumulation: No data is available on the product itself.

Bioaccumulation - Components

Benzyl alcohol Low bioaccumulation potential.



DISPOSAL CONSIDERATIONS

Waste from residues / unused products: Contact supplier if guidance is required.

Contaminated packaging Dispose of container and unused contents in accordance with federal, state, and local requirements.

TRANSPORT INFORMATION

DOT

Proper shipping name : Isophoronediamine Mixture

Class: 8

UN/ID No. : UN2289

Packing group : III

IATA

Proper shipping name : Isophoronediamine Mixture

Class : 8

UN/ID No. : UN2289

Packing group : III

IMDG

Proper shipping name : ISOPHORONEDIAMINE MIXTURE

Class : 8

UN/ID No. : UN2289

Packing group : III

TDG

Proper shipping name : ISOPHORONEDIAMINE MIXTURE

Class : 8

UN/ID No. : UN2289

Packing group : III

Further Information

Note: If regulated as a hazardous material (Dangerous Good) in transportation, please refer to shipping papers or contact Air Products for complete shipping description information.

OTHER INFORMATION

HMS Rating

Health Flammability : 1

Physical hazard :



REGULATORY INFORMATION

OSHA Hazard Communication Standard (29 CFR 1910.1200) Hazard Class(es)
Corrosive.

Country Regulatory list Notification

USA TSCA Included on Inventory.

EU EINECS Included on EINECS inventory or polymer
substance, monomers included on
EINECS inventory or no longer polymer.

Canada DSL Included on Inventory.

Australia AICS Included on Inventory.

Japan ENCS Included on Inventory.

South Korea ECL Included on Inventory.

China SEPA Included on Inventory.

Philippines PICCS Included on Inventory.

EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification:

Acute Health Hazard

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus'
level:

None.

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

This product does not contain any chemicals known to State of California to
cause cancer, birth defects or any other harm.

WHMIS Hazard Classification

Toxic Material Causing Other Toxic Effects, Corrosive Material

WHMIS Trade Secret Registry Number(s)

5024 Grant Date 5/5/2004

IMPORTANT NOTICE:

Read the MSDS and TDS carefully prior to use as application or performance data may
change from time to time. In emergency, contact the Poisons Information Centre (phone
13 11 26 within Australia) or a doctor for advice.

PRODUCT DISCLAIMER:

This Technical Data Sheet (TDS) summarises to the best of our knowledge the product,
including how to use and apply the product based on the information available at the
time.

You should read this TDS carefully and consider the information in the context of how you
will apply the product, including if it is being used in conjunction with any other products,
the type of surfaces and the manner in which the product will be applied. Our
responsibility for products sold is subject to our standard terms and conditions of sale. All
Purpose Coatings does not accept any liability either directly or indirectly for any losses
suffered that arises from the use or application of the product whether or not in
accordance with any advice, specification, recommendation or information given by it.