
MATERIAL SAFETY DATA SHEET

1. Identification of the substance/preparation and Company

Product Code:

**REETOP ES006 A
RESIN**

Supplier:

Reepol CBP Limited
Unit G4, Court Works
Bridgnorth Road
Madeley
Telford TF7 4JB
Tel: 01952-588575/Fax: 01952-587886

Application: Coating Component

2. Hazards Identification

Hazard designation Xi, Irritant.

Main Hazards: Irritating to eyes and skin. May cause sensitisation by skin contact. Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.

Other Hazards: Not classified as flammable but will burn.

3. Composition/information on Ingredients

Hazardous Ingredients: BISPHENOL A – (EPICHLORHYDRIN) {REACTION PRODUCT} 50-70%
EINECS: 500-033-5 CAS: 25068-38-6
(Xi) R36/38; (Sens) R43; (N) R51/53
BISPHENOL F EPICHLORHYDRIN RESIN WITH NUMBER AVERAGE 10-30%
CAS: 28064-14-4
(Xi) R36/38; (Sens) R43; (N) R51/53
ALIPHATIC GLYCIDYLETHER 10-30%
CAS: 68081-84-5
)Xi) R36/38; (Sens) R43; (N) R51/53

Contains: Blend of liquid epoxy resin(s) and a reactive diluent.

4. First Aid Measures

Symptoms

Skin Contact - There may be irritation and redness at the site of contact.

Eye Contact - There may be irritation and redness.

Ingestion - There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur.

Action

Skin Contact - skin.
on skin. NO NOT DELAY Remove all contaminated clothes and footwear immediately unless stuck to
Drench the affected skin with running water for 10 minutes or longer if substance is still
Transfer to hospital if there are burns or symptoms of poisoning.

Eye Contact - specialist DO NOT DELAY Bathe the eye with running water for 15 minutes. Transfer to hospital for examination.

Ingestion - Do not induce vomiting. If rapid recovery does not occur, obtain medical attention.

Inhalation - No specific measures.

5. Fire Fighting Measures

Extinguishing media: water Foam, water spray or fog. Use water spray to cool containers. Unsuitable extinguishing media is in a jet.

Exposure Hazards: combustion Not classified as flammable but will burn. Carbon monoxide may evolve if incomplete occurs.

Protection of Fire Fighters: with skin and eyes. Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

6. Accidental Release Measures

Personal Precautions: Do not attempt to take action without suitable protective clothing – see section 8 of SDS.

Environmental Precautions: material enters drains called to assist in this Do not discharge into drains or rivers. Contain the spillage using bunding. If the it should be pumped out into an open vessel, emergency services should be operation.

Clean-up Procedures: method. Scrub contaminated waste. Put leaking Transfer to a labelled container for for small spillage. Refer to section 13 of SDS for suitable method of disposal. Small spillage: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate contaminated surfaces with detergent solution. Retain washings as containers in a labelled drum or over-drum. Large spillages: product recovery or safe disposal – otherwise treat as

7. Handling and Storage

Handling Requirements: Ensure there is sufficient ventilation of the area. Avoid direct contact with the substance.

Storage Conditions: Avoid Store in cool, well ventilated area. Keep container tightly closed. Store at ambient temperature. incompatible materials and conditions – see section 10 of SDS.

8. Exposure Controls/Personal Protection

Engineering Measures: Ensure there is sufficient ventilation of the area.

Respiratory Protection: Not required under normal conditions in a well ventilated work place. In poorly ventilated areas

use an approved organic vapour cartridge mask.

Hand Protection: Material of gloves for long term application (BBT>480 min)Material of gloves for short term/splash application. Break through time of the glove material >8 hours. Nitrile gloves. Butyl gloves. Neoprene gloves. PVC gloves. Use gloves approved to relevant standards e.g. frequency and duration of contact, chemical resistance of glove material and dexterity. Always seek advice from glove suppliers.

Eye Protection: Goggles giving complete protection to eyes and eyewash bottle with clean water.

Skin Protection: Protective clothing with elasticated cuffs and closed neck. Boots made of PVC.

9. Physical and Chemical Properties

State: Liquid
Colour: Pale Yellow & Coloured
Odour: Barely perceptible odour.
Oxidising: Non-oxidising (by EC criteria)
Solubility in Water: 11.6 mg/l @20°C
Viscosity: 0,7 -1,6 Pa.s: 25°C ASTM D-445
Boiling Point/range°C: 150°C
Flash Point: 150°C
Part.coeff. n-octanol/water: Not determined
Auto-flammability °C: ca.400°C
Vapour pressure: <0.1 mbar at 20°C
Relative density: 1.12-1.75kg/m³ at 25°C

10. Stability and Reactivity

Stability: Stable under normal conditions. Reacts with strong oxidising agents.

Conditions to avoid - Caustic soda can induce vigorous polymerisation at temperatures around 200°C

Materials to avoid - Strong mineral acids Caustic soda.

Hazardous Decomposition Products - Hazardous decomposition products are not expected to form during normal storage. Polymerises exothermically with amines, mercaptans and Lewis acids at ambient temperature and above Polymerises in contact with caustic soda. Reacts exothermically with bases (e.g. caustic soda), ammonia, primary and secondary amines, alcohols and acids.

11. Toxicological Information

Acute Toxicity: Reetop ES006
ORL LD50>2000 mg/kg
SKN LD50>2000 mg/kg

Hazardous Ingredients: BISPHENOL A – (EPICHLORHYDRIN) {REACTION PRODUCT}
ORL MUS LD50 15600 mg/kg
ORL RAT LD50 11400 mg/kg
SKN RBT LD50 >20ml/kg

Chronic Toxicity: Danger of cumulative effects if swallowed. May cause sensitisation by inhalation. May cause sensitisation by skin contact. Not expected to be a mutagenic hazard.

Routes of Exposure: Slight eye irritant. Expected to be a skin sensitiser. Basis for assessment: - Information given is based on data on the components and the toxicology of similar products.

12. Ecological Information

Ecotoxicity: REETOP ES006
ALGAE <LC/EC/IC 50 10 mg/1
FISH < LC/EC/IC 50 10mg/1
INVERTEBRATES <LC/EC/IC 50 10 mg/1

Mobility: Sinks in water. If product enters soil, one or more constituents will be mobile and may contaminate groundwater.

Persistence and Expected to be not readily biodegradable.
degradability:

Bioaccumulative potential: Bioaccumulation potential

Other Adverse Effects: Sewage treatment: Expected to be practically non toxic, LC/EC/IC 50> 100mg/1

13. Disposal Considerations

Disposal Operation: Recover or recycle if possible, otherwise, incinerate. Dispose to licensed disposal contractor.

Disposal of packaging: Drain container thoroughly. Rinse three times with suitable solvent. Treat rinsings as for product disposal. After draining, vent in a safe place away from sparks and fire where practical, containers and specialised disposal packaging should be recycled by a licensed contractor. Arrange for collection by company.

NB: The recommendations given are considered appropriate for safe disposal. However, local regulations may be more stringent and these must be complied with.

14. Transport Information

RID/ADR Classification code: M6
UN No.: 3082

ADR class No.: 9 Packing Group: III

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S
(LIQUID EPOXY RESIN, ALIPHATIC GLYCIDYL ETHER)

ADR label No.: 9 Hazard ID No.: 90

IMDG/IMO
UN No. Sea: 3082 Packing Group: III
IMDG Class: 9 EmS No.: F-A, S-F
Marine Pollutant: YES
label No.: 9

IATA/ICAO
UN No. Air: 3082 ICAO Class: 9
Packing Group: III
Packing Instructions: 914
Labelling: 9

15. Regulatory Information

Code Letter & Hazard - X Irritant.
Dangerous for the environment

Risk phrases:
36/38 - Irritating to eyes and skin.
43 - May cause sensitisation by skin contact.
R51/53 - Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.

Safety phrases:
24 - Avoid contact with skin.
26 - In case of contact with eyes, immediately rinse with plenty of water and seek medical advice.
28 - After contact with skin, wash immediately with plenty of soap and water.
37/39 - Wear suitable gloves and eye / face protection.
61 - Avoid release to the environment. Refer to special instructions / safety data sheets.

Precautionary Phrases: Labelling according to EC Directives : Contains: EPOXY RESIN (NUMBER AVERAGE
MOLECULAR WEIGHT <700)

Haz Ingredients (label): BISPHENOL A – (EPICHLORHYDRIN) {REACTION PRODUCT} BISPHENOL F
EPICHLORHYDRIN RESIN WITH NUMBER AVERAGE; ALIPHATIC GLYCIDYLETHER

Note: applicable to possible existence of national, international The regulatory information given above only indicates the principal regulations specially applicable to the product described in the safety data sheet. The users attention is drawn to the additional provisions which complete these regulations. Refer to all applicable and local regulations or provisions.

16. Other Information

Notification Status: EU – EINECS : Included on EINECS inventory or polymer substance, monomers included on EINECS inventory or no longer polymer.

USA – TSCA : Included on inventory
Canada – DSL : Included on Inventory
Australia – AICS : Included on inventory
IECSC : All components listed
KECI (KR) : All components listed
Philippines – PICCS : Included on inventory

Risk Phrases used in S3 R36/38: Irritating to eyes and skin
R43: May cause sensitisation by skin contact
R51/53: Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.

Legal Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

Note: This material safety data sheet is based on present knowledge. It does not constitute a guarantee of any specific features or establish a legally valid contractual relationship.

It is a guide for the safe handling, storage and use under normal conditions, the user must satisfy himself as to the suitability for intended use.

MATERIAL SAFETY DATA SHEET

1. Identification of the substance/preparation and Company

Product Code:

**REETOP ES006
HARDENER**

Supplier:

Reepol CBP Limited
Unit G4, Court Works
Bridgnorth Road
Madeley
Telford TF7 4JB
Tel: 01952-588575/Fax: 01952-587886

Application: Coating Component.

2. Hazards Identification

Classification:

C Corrosive

R20/22 - Harmful by inhalation and if swallowed.

R34 - Causes burns.

R52/53- Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment.

Emergency Overview:

Harmful if swallowed

Corrosive

Components of the product may effect the nervous system

Harmful in contact with skin

Potential Health Effects:

Inhalation: Can cause severe eye, skin and respiratory tract burns. May cause central nervous system effects, such as headache, nausea, dizziness, confusion, breathing difficulties. Severe cases of overexposure can result in respiratory failure.

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 vapour can cause glaucopsia (corneal edema) when absorbed into the tissue of the eye from the atmosphere. Causes eye burns. May cause blindness.

Skin Contact: Causes skin burns. If Absorbed through the skin, may cause central nervous system effects, such as headache, nausea, dizziness, confusion, breathing difficulties. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Harmful in contact with skin.

Chronic Health Hazard: This product contains no listed carcinogens according to Directive 67/548/EEC, IARC, ACGIH and /or NTP in concentrations of 0.1 percent or greater.

Aggrevated Medical

Condition:

Eye disease
Skin Disorders and Allergies

Target Organs: Neurological Disorders
 Skin
 Eyes
 Central nervous system

3. Composition/information on Ingredients

A mixture containing:

CAS No	Components	Concentration Weight	EINECS/ELINCS Number	Classification
135108-88-2	Methyleneoxide, polymer with benzenamine, hydrogenated	25% - 50%		C; R34, R22
90-72-2	2,4,6- Tris (dimethylaminomethyl) phenol	< 10%	202-013-9	Xn R22, R36/38
100-51-6	Benzyl Alcohol	25% - 50%	202-859-9	Xn R20/22
1761-71-3	4,4 – Methylenebis (cyclohexylamine)	< 5%	217-168-8	C;N R53, R51, R35, R22

Refer to section 16 for full text of each relevant R-phrased

The remaining components are trade secret. CHEMICAL FAMILY: Modified Cycloaliphatic Amine

4. 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.

Ingestion - Never give anything by mouth to an unconscious person. Prevent aspiration of vomit. Turn victims head to the side.

Inhalation - Move to Fresh air.

Skin Contamination -
without
care. If
with sterile Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so 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 dressing.

Eye Contamination - 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.

5. 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 dioxide. May generate ammonia gas. May generate toxic nitrogen oxide gases. Burning procedures 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 fire fighting if necessary.

Further Information

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

6. 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

Approach suspected leak areas with caution. Place in appropriate chemical waste container.

Additional Advice

If possible stop flow of product

7. Handling and Storage

Handling

Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Suspected cancer-causing nitrosamines could be formed. Avoid contact with skin, 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 in cool, dry, ventilated storage and in closed containers.
Keep from Freezing

8. 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

Hand Protection

Butyl-ruber

Nitrile rubber

Neoprene gloves

Impervious Gloves

PVC disposable Gloves

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

Eye Protection

Chemical safety glasses, full face shield with splash proof eye goggles.

Contact lenses should not be worn.

Skin Protection

Impervious clothing

Full rubber suit (rain gear).

Rubber or plastic boots.

Environmental Exposure Controls

Construct a dike to prevent spreading

Special Instructions for Protection and Hygiene

Discard contaminated leather articles. Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Provide readily accessible eye wash stations and safety showers. Wash at the end of each workshift and before eating, smoking or using the toilet.

9. Physical and Chemical Properties

Form -	liquid.	Relative Density -	1.02.
Colour -	Amber.	Vapour Pressure -	<1.00mmHg
Odour -	Ammoniacal,		
Boiling Point/Range -	> 200°C (>392°F)		
Flashpoint -	>100°C		
Viscosity-	220 mPa.s at 25°C		

10. Stability and Reactivity

Stability- Stable under normal conditions

Conditions to avoid - Not applicable.

Materials to avoid - Reactive metals (e.g. sodium, calcium, zinc etc)
Materials reactive with hydroxyl compounds

CAUTION N-Nitrosamines, many of which are known to be potent carcinogens, may be formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations.
 Nitrous acid and other nitrosating agents.
 Organic acids (i.e. acetic acid, citric acid etc.)
 Mineral acids
 Sodium hypochlorite
 Product slowly corrodes copper, aluminium, zinc and galvanised surfaces.
 Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion.
 Oxidizing agents

Hazardous Decomposition Products -

Carbon Monoxide.
 Carbon Dioxide (CO₂)
 Ammonia
 Nitrogen Oxides (NO_x).
 Nitrogen oxide can react with water vapours to form corrosive nitric acid.
 Nitric Acid
 Aldehydes
 Flammable hydrocarbon fragments
 Nitrosamine

11. Toxicological Information

Acute Health Hazard

Ingestion No data is available on the product itself.

Ingestion – Components

Methyleneoxide, polymer With benzenamine, hydrogenated	LD50: 367 mg/kg	Species: Rat
2,4,6 Tris (dimethylaminomethyi) phenol	LD50: 1,673 mg/kg	Species: Rat
2,4,6 Tris (dimethylaminomethyi) phenol	LD50: 2,169 mg/kg	Species: Rat
Benzyl alcohol	LD50: 1,230 mg/kg	Species: Rat
4,4 Methylenebis (cyclohexylamine)	LD50: 625 mg/kg	Species:

Rat

Inhalation No data is available on the product list

Inhalation-Components

Benzyl alcohol;	LC50 (4h):> 4.178 Mg/IOECD test Guideline 403	Species: Rat
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Skin No data is available on the product list

Skin-Components

Methyleneoxide, polymer With benzenamine, hydrogenated	LD50: 1,000 mg/kg	Species: Rabbit
2,4,6 Tris (dimethylaminomethyi) phenol	LD50: 1,242 mg/kg	Species: Rabbit
Benzyl alcohol	LD50: 2,000 mg/kg	Species: Rabbit
4,4 Methylenebis (cyclohexylamine)	LD50: 2,110 mg/kg	Species:

Rabbit

Sensitization cause Dermal sensitization to this product or component has been seen in some humans. The results of a test on guinea pigs showed this substance to be a weak skin sensitizer. May sensitization of susceptible persons by skin contact.

Chronic Health Hazard

weight The No-Observed-adverse-effect-level (NOAEL) was 15 mg/kg/day. Rats exposed orally to 800 mg/kg benzyl alcohol for thirteen weeks exhibited CNS depression and hitopathological 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.

12. Ecological Information

Ecotoxicity Effects

Aquatic Toxicity No data is available on the product itself

Toxicity to fish – Components

Benzyl Alcohol	LC50 (96 h) : 10 mg/I	Species: Bluegill Sunfish (Lepomis Macrochirus)
Benzyl Alcohol	LC50 (96 h) : 460 mg/I	Species: Fathead minnow (Pimephales promelas)
4,4 Methylenebis (cyclohexylamine)	EC50: (96 h) 46 -100 mg/I	Species: Golden orfe (Leuciscus

idus)

Toxicity to algae- Components

Benzyl Alcohol	IC50 (72 h) : 700 mg/I	Species: Algea
4,4 Methylenebis (cyclohexylamine)	EC50: (72 h) 140-200 mg/I	Species: Algea

Toxicity to other organisms No data available

Persistence and Degradability

Mobility No Data available

Bioaccumulation No Data available

Bioaccumulation –Components

Methyleneoxide, polymer With benzenamine, hydrogenated	Does not bioaccumulate
Benzyl Alcohol	Low bioaccumulation potential

13. 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

14. Transport Information

ADR/RID class: 8 (C) Corrosive substances
Danger code (Kemler): 80
UN-Number: 2735
Packaging group: III
Hazard Label: 8
Description of Goods: 2735POLYAMINES, LIQUID, CORROSIVE, N.O.S. (m-phenylenebis (methylamine), ISOPHORONEDIAMINE)

Maritime transport IMDG:
IMDG Class: 8
UN Number: 2735
Label: 8
Packaging group: III
EMS Number: F-A, S-B
Marine pollutant: No
Proper shipping name: POLYAMINES, LIQUID,CORROSIVE, N.O.S. (m-phenylenebis (methylamine), ISOPHORONEDIAMINE)

Air transport ICAO-TI and IATA-DGR:
ICAO/IATA Class: 8
UN/ID Number: 2735
Label: 8
Packaging group: III
Proper shipping name: POLYAMINES, LIQUID,CORROSIVE, N.O.S. (m-phenylenebis (methylamine), ISOPHORONEDIAMINE)

15. Regulatory Information

EEC Symbol Corrosive (C).
EEC Council Directives relation to the classification, packaging and labelling of dangerous substances and preparations
Risk (R) and Safety (S) phrases.

Risk phrases:
20/22 - Harmful in contact with skin and if swallowed.
34 - Causes burns.
52/53 - Harmfull to aquatic organisms, may cause long term adverse effects in the aquatic environment.

Safety phrases:
26 - In case of contact with eyes, immediately rinse with plenty of water and seek medical advice.
36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.
45 In case of accident or if you feel unwell, seek medical advice immediately.

60

This material and /or its container must be disposed of as hazardous waste.

Other Regulatory Information

16. Other Information

Phrases – Components

R34 Causes Burns

R22 Harmful

R22 Harmful if swallowed

R36/38 Irritating to eyes and skin

R20/22 Harmful by inhalation and if swallowed

R53 May cause long term adverse effects in the aquatic environment

R51 Toxic to aquatic organisms

R22 Harmful if swallowed

This Safety Data Sheet has been written to comply with Directives 91/155/EEC (the "Safety Data Sheet Directive") and 88/379/EEC (the "General Preparations Directive").

Note: This material safety data sheet is based on present knowledge. It does not constitute a guarantee of any specific features or establish a legally valid contractual relationship.

It is a guide for the safe handling, storage and use under normal conditions, the user must satisfy himself as to the suitability for intended use.

