



Material Safety Data Sheet

1. Identification of the substance/mixture and supplier

Product Name: **Duracoat ESF-80 Hardener**

Recommended use: Epoxy topping binder

Supplier: Uroxsys Ltd

Street Address: 2 Stonedon Drive, East Tamaki, Auckland

Telephone Number: +64 9 2740808

Facsimile: +64 9 2740500

Emergency Telephone: After hours phone 0800 867666 (or 09 3034580), quote reference: Uroxsys Helpline

ERMA Approval: HSR002658

2. Hazards identification

Classified as hazardous according to criteria in the HS (Minimum Degrees of Hazard) Regulations 2001
Classified as Dangerous Goods by NZS 5433:1999 Transport of Dangerous Goods on Land.

Subclass 6.1 Category D - Substances which are acutely toxic

Subclass 6.5 Category B - Substances that are contact sensitisers

Subclass 8.2 Category C - Substances that are corrosive to dermal tissue

Subclass 8.3 Category A - Substances that are corrosive to ocular tissue

Risk phrases: R34 Causes burns
R41 Risk of serious damage to eyes
R43 May cause sensitisation by skin contact.

Safety Phrases S24/25 Avoid contact with skin and eyes
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28 After contact with skin, wash immediately with plenty of soap and water.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

3. Composition/information on hazardous ingredients

Benzyl Alcohol	100-51-6	30-60%	R20/22
4,4'-Methylenebiscyclohexanamine	1761-71-3	10-30%	R36/37/38,R43
Cyclohexanamine, 4,4'-methylenebis- (reaction products with bisphenol A diglycidylether homopolymer)	129733-57-9	10-30%	R36/37/38,R43

4. First-aid measures

If poisoning occurs, contact a doctor or Poisons Information Centre Phone 0800 764 766.

Ingestion: In the event of ingestion, administer 3-4 glasses of milk or water. Do not induce vomiting. Seek medical advice.

Inhalation: Move patient to fresh air. If breathing has stopped or is labored give assisted respiration (e.g. mouth-to-mouth). Supplemental oxygen may be indicated. Seek medical advice. Prevent aspiration of vomit. Turn victim's head to the side.

Skin Contact: Remove contaminated clothing and shoes. Remove product and immediately flush affected area with water for at least 15 minutes. Cover the affected area with a sterile dressing or clean sheeting and transport for medical care. Do not apply greases or ointments. Control shock, if present.

Eye Contact: Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Seek medical advice.

Notes to physician:

Burns of the eye may cause blindness. Contact of undiluted product with the eyes or skin quickly causes severe irritation and pain and may cause burns, necrosis and permanent injury. Inhalation of vapors may severely damage contacted tissue and produce scarring. Inhalation of aerosols and mists may severely damage contacted tissue and produce scarring. Product is absorbed through the skin and may cause nausea, headache and general discomfort.

5. Fire-fighting measures

Specific Hazards: Corrosive substance

Fire-fighting advice: On burning will emit toxic fumes including those of oxides of nitrogen and oxides of carbon. Keep containers cool with water spray. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing.

Suitable Extinguishing Media:

Foam, dry agent (carbon dioxide, dry chemical powder).

Hazchem Code: 3X

6. Accidental release measures

Emergency procedures: If contamination of sewers or waterways has occurred advise local emergency services.

Methods for containment & clean up:

For small spills: Wear protective equipment to prevent skin & eye contact. Wipe up with rag or absorbent paper.

For large spills: Wear protective equipment to prevent skin and eye contamination and inhalation of vapours. Contain - prevent runoff into drains and waterways. Use absorbent material (sand or earth). Collect and seal in properly labeled containers for disposal.

7. Handling and storage

Handling advice: Avoid skin and eye contact and breathing in vapour. Keep out of reach of children.

Storage advice: Store in a cool, dry, well ventilated place and out of direct sunlight. Store away from sources of heat or ignition. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

8. Exposure controls/personal protection

Occupational Exposure Limits:

No value assigned for this specific material by the New Zealand Occupational Safety and Health Service (OSH).

Engineering Control Measures:

Ensure ventilation is adequate. Respiratory protection is not required under normal conditions in a well-ventilated workplace. An organic vapor respirator National Institute for Occupational Safety and Health (NIOSH) approved for organic vapors is recommended under emergency conditions.

Personal Protective Equipment:

Wear full face shield with goggles underneath, rubber boots, protective clothing and gloves.

9. Physical and chemical properties

Physical state:	mobile liquid
Colour:	colourless
Solubility:	<1%.
Specific Gravity:	1.03
Flash Point (°C):	112°C (closed cup)
Flammability Limits (%):	no data available
Boiling Point/Range (°C):	207°C

10. Stability and reactivity

Stability: Stable at normal temperatures and storage conditions.

Materials to avoid: Oxidising agents, acids

Hazardous decomposition products: Nitric Acid, ammonia, nitrogen oxides.

11. Toxicological information

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion: No information available.

Eye contact: Corrosive to eyes. Severe eye irritant. Burns of the eye may cause blindness.

Skin contact: Corrosive to skin. May cause burns, necrosis and permanent injury. Severe skin irritant. May cause skin sensitization. Product is absorbed through the skin and may cause nausea, headache and general discomfort.

Inhalation: Corrosive to respiratory system. Severe respiratory tract irritant. Inhalation of vapours may severely damage contacted tissue and produce scarring.

Long Term Effects:

Repeated and/or prolonged exposure may cause allergic reaction/sensitization. Repeated and/or prolonged exposures may result in: adverse respiratory effects (such as cough, tightness of chest or shortness of breath), adverse eye effects (such as conjunctivitis or corneal damage), adverse skin effects (such as rash, irritation or corrosion). Repeated and/or prolonged exposure to low concentrations of vapor may cause: sore throat which are transient

Toxicological Data:

Acute oral toxicity (LD50, RAT) >2000.00 mg/kg (No deaths)

Acute dermal toxicity (LD50, RABBIT) >2110.00 mg/kg (Estimate)

Acute inhalation toxicity (LC50, RAT) No Data

Irritation effects data: Corrosive to the skin of a rabbit.

12. Ecotoxicological information

Avoid contaminating waterways.

13. Disposal considerations

Refer to Waste Management Authority. Dispose of material through a licensed waste contractor.

14. Transport information

Road and Rail Transport

Classified as Dangerous Goods by NZS 5433:1999 Transport of Dangerous Goods on Land.

UN No: 2735

Class-primary 8

Packing Group: III

Proper Shipping Name: AMINES, LIQUID, CORROSIVE, NOS (4,4'Methylenebiscyclohexanamine)

Hazchem Code: 3X

Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

UN No: 2735

Class-primary 8

Packing Group: III

Proper Shipping Name: AMINES, LIQUID, CORROSIVE, NOS (4,4'Methylenebiscyclohexanamine)

Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

UN No: 2735

Class-primary 8

Packing Group: III

Proper Shipping Name: AMINES, LIQUID, CORROSIVE, NOS (4,4'Methylenebiscyclohexanamine)

15. Regulatory information

Classified as hazardous according to criteria in the HS (Minimum Degrees of Hazard) Regulations 2001

Subclass 6.1 Category D - Substances which are acutely toxic

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Subclass 8.2 Category C - Substances that are corrosive to dermal tissue

Subclass 8.3 Category A - Substances that are corrosive to ocular tissue

16. Other information

This MSDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Uroxsys Limited cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact Uroxsys Limited at the contact details on page 1.

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