



Material Safety Data Sheet

1. Identification of the substance/mixture and supplier

Product Name: **ECS Hardener**

Recommended use: Epoxy hardener

Supplier: Uroxsys Ltd
Street Address: 17 Trugood 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: HSR002659

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 3.1 Category D (low hazard) - Flammable liquids
Subclass 6.1 Category E - Substances which are acutely toxic
Subclass 6.5 Category B - Substances that are contact sensitisers
Subclass 8.2 Category B - Substances that are corrosive to dermal tissue
Subclass 8.3 Category A - Substances that are corrosive to ocular tissue
Subclass 9.1 Category B - Substances that are ecotoxic in the aquatic environment

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

| | | | |
|--|-------------|------|---------------|
| amine adduct | 111439-78-2 | >60% | - |
| diaminocyclohexane | 694-83-7 | <10% | R36/38,R42/43 |
| 2-methylpentamethylenediamine | 15520-10-2 | <10% | R34,R41,R42 |
| 2,4,6-tris(dimethylaminomethyl) phenol | 90-72-2 | <10% | - |

4. First-aid measures

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

Ingestion: If swallowed, do not induce vomiting. Give large quantities of water. Seek immediate medical assistance. Begin artificial respiration if breathing has stopped. Use mouth to nose rather than mouth to mouth.

Inhalation: Remove victim from area of exposure. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of

any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Get to a hospital or doctor quickly.

Skin Contact: If skin contact occurs, immediately remove contaminated clothing and wash skin thoroughly. Seek medical advice.

Eye Contact: Immediately flush eyes with water for at least 15 minutes and see a doctor.

Notes to physician:

Perforation of the gastrointestinal tract may occur 2-4 days after ingestion.

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. Keep containers closed when not in use.

Personal Protective Equipment:

Wear overalls, chemical goggles and impervious gloves. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. Physical and chemical properties

| | |
|---------------------------|--------------------|
| Physical state: | Clear amber liquid |
| Colour: | Amber |
| Solubility: | Negligible |
| Specific Gravity: | 1.0 |
| Flash Point (°C): | 75°C |
| Flammability Limits (%): | Not available |
| Boiling Point/Range (°C): | >170°C |

10. Stability and reactivity

Stability: Stable at normal temperatures and storage conditions. Incompatible with strong acids and oxidizing agents.

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: May cause severe burning of the mouth and upper gastrointestinal tract with pain, bleeding, vomiting, diarrhea and decreased blood pressure.

Eye contact: Causes burns. May cause eye corrosion with corneal or conjunctival ulceration. High concentrations of vapours will cause irritation.

Skin contact: Causes burns or ulceration. May cause allergic skin rashes.

Inhalation: Inhalational overexposure may cause nose, throat, or lung irritation.

Long Term Effects:

Prolonged or repeated exposure may cause skin sensitization or other allergic response.

Toxicological Data:

No LD50 data available for the product.

However, for constituent cycloaliphatic polyamine:

Oral ALC (rat): 2300 mg/kg, Inhalation 4 hour ALC: 3.2 mg/l

For 2-methylpentamethylenediamine:

Oral LD50 (rat): 1690 mg/kg, Inhalational LC50 (rat): 1 hour: 4.9 mg/l

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 Corrosive

Packing Group: II

Proper Shipping Name: AMINES, LIQUID, CORROSIVE, NOS
(diaminocyclohexane & methylpentamethylenediamine)

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 Corrosive

Packing Group: II

Proper Shipping Name: AMINES, LIQUID, CORROSIVE, NOS
(diaminocyclohexane & methylpentamethylenediamine)

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 Corrosive

Packing Group: II

Proper Shipping Name: AMINES, LIQUID, CORROSIVE, NOS
(diaminocyclohexane & methylpentamethylenediamine)

15. Regulatory information

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

Subclass 3.1 Category D (low hazard) - Flammable liquids

Subclass 6.1 Category E - Substances which are acutely toxic

Subclass 6.5 Category B - Substances that are contact sensitisers

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

Subclass 9.1 Category B - Substances that are ecotoxic in the aquatic environment

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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