Safety Data Sheet

UROXSYS

1. Identification

Product Name:	ESC Hardener Component
Recommended use:	Hardener for ECS epoxy systems
Supplier:	Uroxsys Ltd
Street Address:	2 Stonedon Drive, East Tamaki, Auckland
Telephone Number:	+64 9 2740808 (8.00am to 5.00pm, Monday to Friday)
Emergency Telephone:	After hours phone CHEMCALL 0800 243622 (or +64 4 9179888)
National Poison Information Centre	0800 POISON (764766)
Date of issue	5 March 2025

2. Hazards identification

GHS classification of the substance/mixture:
Classified as Hazardous according to Hazardous Substances (Hazard Classification) Notice 2020
Classified as Dangerous Goods for transport according to the New Zealand Standard NZS 5433: 2020 Transport of Dangerous Goods.

Acute oral toxicity Category 4, Skin corrosion Category 1C, Serious eye damage Category 1, Specific target organ toxicity, repeated exposure Category 2, Skin sensitisation Category 1, Hazardous to the aquatic environment (chronic) Category 3

EPA Approval: HSR002658
Surface Coatings and Colourants (Corrosive) Group Standard 2020
6.1D(O), 8.2C, 8.3A, 6.5B, 6.9B, 9.1C

Signal Word:
DANGER

Hazard Statements:

H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction
H318: Causes serious eye damage.
H373: May cause damage to organs through prolonged or repeated exposure.
H412: Harmful to aquatic life with long lasting effects.

Precautionary Statements – Prevention:

P103: Read label before use.
P102: Keep out of reach of children.
P260: Do not breathe fume/gas/mist/vapours/spray.
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke while using this product.
P273: Avoid release to the environment.
P280: Wear protective gloves/clothing/eye protection/face protection.

Precautionary Statements – Response:

P101: If medical advice is needed, have product container or label at hand.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P301+P312:. IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with plenty of soap and water.
P333+P313: If skin irritation occurs. Get medical advice/attention.
P304+P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER or doctor/physician.
P363: Wash contaminated clothing before reuse.

Precautionary Statements – Storage:

P405: Store locked up
P403+P233: Store in well ventilated place. Keep container tightly closed.

Precautionary Statements – Disposal:

P501: Do not let product enter the environment. Do not dispose of in waterways or sewers. Unwanted product should be reacted with appropriate amount of resin brushed out on newspaper, allowed to cure and then disposed of via domestic waste collection. Empty containers should be left open in a well-ventilated area to cure. When cured, recycle the container via recycling programs. Disposal of empty paint containers via domestic recycling programs may differ between local authorities. Check with your local council first.

3. Composition/information on ingredients

Material	CAS No	%
Isophorone diamine	2855-13-2	>60%
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, reaction products with 5-amino-1,3,3-trimethylcyclohexanemethanamine and 2-methyl-1,5-pentanediamine (Epoxy adduct)	1075254-00-0	20-40
2-methylpentamethylenediamine	15520-10-2	<5%
3-aminopropyltriethoxysilane	919-30-2	<3%
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled	8007-24-7	<2%

4. First-aid measures

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

Ingestion:	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.
Inhalation:	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin Contact:	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. Wash contaminated clothing before reuse.
Eye Contact:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

5. Fire-fighting measures

Suitable Extinguishing Media: Foam, dry agent (carbon dioxide, dry chemical powder).

Specific hazards:	Combustible material.
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.
Hazchem Code	3X

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:
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.
Environmental related measures:
Do not allow to escape into waterways, wastewater or soil. If contamination of sewers or waterways has occurred advise local emergency services.

Methods for containment & clean up:
Wear protective equipment to prevent skin & eye contact. Wipe up with rag or absorbent paper.
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 labelled containers for disposal.

7. Handling and storage

Precautions for safe handling:	Avoid skin and eye contact and breathing in vapour. Keep out of reach of children.
Condition for safe storage, including incompatibilities:	Store locked up. 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 Worksafe NZ.
Biological Limit Values:	No biological limits allocated.
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
Odour:	Not established
Odour Threshold:	not established
pH:	not applicable
Melting/Freezing point:	not established
Boiling point/boiling range:	>200 °C

Flash point:	>100 °C
Flammability (solid, gas):	not applicable
Upper/lower flammability or explosive limits:	not available
Vapour pressure:	not established
Vapour density:	not established
Specific gravity:	0.967
Solubility:	Negligible
Partition coefficient (n−octanol/water):	not established
Auto-ignition temperature:	not applicable
Decomposition temperature:	not established
Viscosity:	not established
Particle characteristics:	not established

10. Stability and reactivity

Stability:	Stable at normal temperatures and storage conditions.
Conditions to avoid:	Elevated temperatures and sources of ignition.
Incompatible materials:	Incompatible with strong acids and oxidizing agents.
Hazardous decomposition products:	Oxides of carbon and nitrogen, smoke and other toxic fumes.

11. Toxicological information

Data sourced from raw material SDSs and/or CCID.
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:

Acute Effects
Inhalation: Material may be an irritant to mucous membranes and respiratory tract.
Skin contact: Harmful in contact with skin. Can be absorbed through the skin with resultant toxic effects. Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns. A skin sensitiser. Repeated or prolonged skin contact may lead to allergic contact dermatitis.
Ingestion: Harmful if swallowed. Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.
Eye contact: A severe eye irritant. Corrosive to eyes: contact can cause corneal burns. Contamination of eyes can result in permanent injury.

Acute toxicity
Isophorone diamine: Oral LD50 (rat) 1030mg/kg, Inhalation LC50 (rat) >5.01 mg/l 4h
2-methylpentamethylenediamine: Dermal LD50 (rabbit) 1870 mg/kg, Inhalation LC50 (rat) 4.9 mg/l/1h, Oral LD50 (rat) 1170 mg/kg
Cashew Nut Oil: Oral LD50 (rat) >2000 mg/kg, Dermal LD50 (rat) 2000 mg/kg
3-aminopropyltriethoxysilane: Oral LD50 (rat) 1570 mg/kg, Dermal LD50 (rabbit) 4290 mg/kg

Corrosion/Irritancy: Eye: this material has been classified as a Category 1 Hazard (irreversible effects to eyes). Skin: this material has been classified as a Category 1C Hazard (irreversible effects to skin).

Sensitisation: Inhalation: Not classified
Skin: this material has been classified as a Category 1 Hazard (skin sensitiser).

Aspiration hazard: This material has been classified as not an aspiration hazard.

Specific target organ toxicity (single exposure): This material has been classified as not a specific hazard to target organs by a single exposure.

Specific target organ toxicity (repeated exposure): This material has been classified as specific hazard to target organs by a repeated exposure.

Mutagenicity: This material has been classified as non-hazardous.

Carcinogenicity: This material has been classified as non-hazardous.

Reproductive toxicity (including via lactation): This material has been classified as non-hazardous.

12. Ecological information

No LD50 data available for the product.

Avoid contaminating waterways.
For constituent:
Isophorone diamine: Toxicity to fish: LC50 (96 h) 110 mg/l, Leuciscus idus, Aquatic invertebrates: EC50 (48 h) 23 mg/l, Daphnia magna
2-methylpentamethylenediamine: Algae EC50 >100mg/l/72h, Crustacea EC50 19.8 mg/48 h, Fish EC50 1825 mg/l
Cashew nut oil: Toxicity to fish LC50: 1000mg/l/96h, Algae EC50 1300 mg/l/72h
3-aminopropyltriethoxysilane: Toxicity to fish: LC50 331mg/l/48h. Algae EC50 603mg/l/72h

Acute aquatic hazard: This material has been classified as not hazardous for acute aquatic exposure.
Acute toxicity estimate (based on ingredients): > 100 mg/L

Chronic aquatic hazard: This material has been classified as a Category Chronic 3 Hazard. Non-rapidly or rapidly degradable substance for which there are adequate chronic toxicity data available OR in the absence of chronic toxicity data, Acute toxicity estimate (based on ingredients): 1 - 10 mg/L, where the substance is not rapidly degradable and/or BCF ≥ 500 and/or log Kow ≥ 4.

Ecotoxicity in the soil environment: This material has been classified as non-hazardous.
Ecotoxicity to terrestrial vertebrates: This material has been classified as non-hazardous.
Ecotoxicity to terrestrial invertebrates: This material has been classified as non-hazardous.
Ecotoxicity: No information available.
Persistence and degradability: No information available.
Bioaccumulative potential: No information available.
Mobility: No information available.

13. Disposal considerations

Refer to Waste Management Authority. Advise flammable nature. Dispose of material through a licensed waste contractor. Normally suitable for incineration by an approved agent.

Empty container: Do not contaminate storm water with product or product washing. Do not pour product down the drain. Unwanted product should be reacted with appropriate quantity of resin and be brushed out on newspaper, allowed to dry and then disposed of via domestic waste collection. Empty containers should be left open in a well-ventilated area to dry out. When dry, recycle the container via recycling programmes. Disposal of empty paint containers via domestic recycling programmes may differ between local authorities. Check with your local council first.

14. Transport information

Classified as Dangerous Goods for transport according to the New Zealand Standard NZS 5433: 2020 Transport of Dangerous Goods.

Road and Rail Transport
Classified as Dangerous Goods by NZS 5433 Transport of Dangerous Goods on Land.
UN No: 2735
Class-primary 8 Corrosive
Packing Group: III
Proper Shipping Name: AMINES, LIQUID, CORROSIVE, NOS (Isophorone diamine)
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: III
Proper Shipping Name: AMINES, LIQUID, CORROSIVE, NOS (Isophorone diamine)

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: III
Proper Shipping Name: AMINES, LIQUID, CORROSIVE, NOS (Isophorone diamine)

15. Regulatory information

EPA Approval: HSR002658
Surface Coatings and Colourants (Corrosive) Group Standard 2020

Certified Handler : Not required
Tracking: Not required
All ingredients are on the New Zealand Inventory of Chemicals (NZIoC), or exempt.

16. Other information

This SDS 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.

While Uroxsys Ltd believes that the information contained herein is based on data considered accurate, no warranty or representation is expressed or implied for which Uroxsys Ltd assumes legal responsibility.

This version replaces all previous versions.

Glossary
EPA: Environmental Protection Authority (NZ)
WES: NZ Work Exposure Standard
TWA: Time Weighted Average
STEL: Short Term Exposure Limit
CCID: Chemical Classification & Identification Database (EPA)

END OF SDS