



SAFETY DATA SHEET (SDS)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: ECT-VRM 2000 B
Other means of identification: None
Recommended use: Epoxy Hardener. Vapor Reduction Membrane
Manufactured by: CTM Adhesives Inc.
8320 Grenache
Montréal, Québec
Canada H1J 1C5
E-mail Address : www.ctmadhesives.com
Prepared by: The Health, Safety and Environmental Department of CTM Adhesives
Telephone number of preparer: 1-514-321-5540
Fax number: 1-514-321-5570
Emergency Telephone Number:
24-Hour Emergency Telephone Number Canada (CANUTEC) : (613) 996-6666

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification of hazardous product

- Acute Toxicity, Oral (Category 4)
- Acute Toxicity, Dermal (Category 5)
- Skin Sensitization (Category 1A)
- Skin Corrosion/irritation (Category 1B)
- Serious eye damage/irritation (Category 1)
- Reproductive toxicity (Category 2)
- Hazardous to the aquatic environment - acute (Category 1)
- Hazardous to the aquatic environment - chronic (Category 1)

GHS Label Elements: Hazard Pictograms/symbols



Signal Word: DANGER

Hazard and Precautionary Statements:

H302 Harmful if swallowed
H315 Causes skin irritation
H317 May cause an allergic skin reaction
H314 Causes severe skin burns and eye damage
H361 Suspected of damaging fertility or the unborn child
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long lasting effects
P201 Obtain special instructions before use. **P202** Do not handle until all safety precautions have been read and understood. **P260** Do not breathe dust or mist. **P273** Avoid release to the environment. **P280** Wear protective gloves/protective clothing/eye protection/face protection.
P272 Contaminated work clothing should not be allowed out of the workplace. **P270** Do not eat, drink or smoke when using this product.
P264 Wash with plenty of water and soap thoroughly after handling. **P308** + **P313** IF exposed or concerned: Get medical advice/attention.
P305 + **P351** + **P338 IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. **P303** + **P361** + **P353 IF ON SKIN (or hair):** Take off immediately all contaminated clothing. Rinse skin with water [shower]. **P310** Immediately call a POISON CENTER or doctor/physician. **P304** + **P340 IF INHALED:** Remove person to fresh air and keep comfortable for breathing. **P312** Call a POISON CENTER/doctor/...if you feel unwell. **P301** + **P330** + **P331 IF SWALLOWED:** Rinse mouth. Do NOT induce vomiting. **P362** + **P364** Take off contaminated clothing and wash before reuse. **P391** Collect spillage. **P405** Store locked up. **P501** Dispose of contents/container into safe container in accordance with local, regional or national regulations.

Other Hazards Known: None known

GHS Special Labeling: EUH205 - "Contains epoxy constituents. May produce a skin allergy."

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Concentration (%)</u>
epoxy adduct	Proprietary	10 - 30 %
isophorone diamine	2855-13-2	10 - 30 %
benzyl alcohol	100-51-6	1 - 10 %
4-nonylphenol, branched	84852-15-3	10 - 30 %
polyoxypropylene diamine	9046-10-0	20 - 40 %



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SECTION 4. FIRST AID MEASURES

<u>Inhalation</u>	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
<u>Ingestion</u>	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
<u>Skin Contact</u>	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
<u>Eye Contact</u>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Most important symptoms and effects (acute and delayed)

Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General Information

IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure the medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: In case of fire: Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂)

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the hazardous product: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for fire-fighting: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep upwind. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapour. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillage cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Large spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent product from entering drains. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material. Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental Precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust or mist. Do not get in eyes, on skin, or on clothing. Do not get this material in contact with eyes. DO not taste or swallow. When using, do not eat, drink or smoke. Provide adequate ventilation. Should be handled in closed systems, if possible. Pregnant or breastfeeding women must not handle this product. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. Keep container tightly closed. Store away from incompatible materials (see Section 10 of the SDS).



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SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters (biological limit values or exposure limit values and source of those values)

Exposure limits:

CAS Proprietary	No exposure limits noted for the ingredient(s)
CAS 2855-13-2	No exposure limits noted for the ingredient(s)
CAS 100-51-6	No exposure limits noted for the ingredient(s)
CAS 84852-15-3	No exposure limits noted for the ingredient(s)
CAS 9046-10-0	No exposure limits noted for the ingredient(s)

Engineering Controls

Provide good local exhaust ventilation to control vapour/mist. Eye wash facilities and emergency showers must be available when handling this product.

Personal Protective Equipment

Wear a NIOSH-certified (or equivalent) organic vapor/particulate respirator. Wear appropriate chemical resistant protective gloves. Wear tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists. Wear appropriate protective clothing. When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Eyewash fountains and safety showers are recommended in the work area.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State/ Appearance/ Color:	Transparent liquid, Clear	Vapour Pressure:	Not available
Odour:	Slight amine odour	Vapour Density:	Not available
Odour threshold:	Not available	Relative Density:	0.956 (g/ml)
pH:	Not available	Solubility:	Partial
Melting/freezing point:	Not available	Partition coefficient-n-octanol/water:	Not available
Initial boiling point/range:	Not available	Auto-ignition temperature:	Not available
Flash point (closed cup):	> 93 °C	Decomposition temperature:	Not available
Evaporation rate:	Not available	Viscosity:	200-400 cps
Flammability (solids and gases):	Not available	VOC:	224 g/L
Upper and lower flammability/explosive limits	Not available	Other:	None known

SECTION 10. STABILITY AND REACTIVITY

Reactivity: This product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical Stability: This product is stable under normal conditions.

Possibility of hazardous reactions: This product will polymerize if mixed with an epoxy resin. Considerable heat can evolve.

Conditions to Avoid: Avoid temperatures exceeding the flash point. Epoxy resins under uncontrolled conditions.

Incompatible materials: Strong oxidizing agents and acids.

Hazardous decomposition products: Unknown.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely routes of exposure (inhalation, ingestion, skin and eye contact):

May be harmful if inhaled. Harmful if swallowed. May be harmful in contact with skin. May cause an allergic skin reaction. Causes severe skin burns. Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics:

Contains ingredients which are extremely destructive to tissues of the mucous membranes and upper respiratory tract, eyes, and skin. Burning pain and severe corrosive skin damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Coughing, shortness of breath, headaches, and nausea.

Delayed and immediate effects (chronic effects from short- term and long-term exposure):

Skin Sensitization – Sensitization after skin contact possible; **Respiratory Sensitization** – No data available; **Germ Cell Mutagenicity** – No data available; **Carcinogenicity** – No ingredient listed by IARC, ACGIH, NTP or OSHA **Reproductive Toxicity** – Suspected of damaging fertility or the unborn child; **Specific Target Organ Toxicity** — **Single Exposure** – No data available; **Specific Target Organ**



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Toxicity - Repeated Exposure – No data available; **Aspiration Hazard** – Possible; **Health Hazards Not Otherwise Classified** – No data available.

Numerical measures of toxicity (ATE; LD₅₀ & LC₅₀):

CAS Proprietary	No data available
CAS 2855-13-2	LD ₅₀ , Oral - Rat 1030 mg/kg
CAS 100-51-6	LD ₅₀ , Oral - Rat 1360 mg/kg
CAS 84852-15-3	LD ₅₀ , Oral- Rat - 1300 mg/kg LD ₅₀ , Dermal- Rabbit - 3160 mg/kg
CAS 9046-10-0	LD ₅₀ , Oral- Rat - 2885.3 mg/kg LD ₅₀ , Inhalation - Rat - 8h > 0.74 mg/l LD ₅₀ , Dermal- Rabbit - 2980 mg/kg

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity (aquatic and terrestrial information):

Very toxic to aquatic life with long lasting effects.

Product	Species	Result
CAS Proprietary	No data available	No data available
CAS 2855-13-2	LC ₅₀ Leuciscus idus (ide)	110 mg/l - 96 h
	EC ₅₀ Daphnia magna	23 mg/l - 48 h
	EC ₅₀ Chaetogammarus marinus	388 mg/l - 48 h
CAS 100-51-6	LC ₅₀ Pimephales promelas (fathead minnow)	460 mg/l - 96 h
	LC ₅₀ Lepomis macrochirus (bluegill)	10 mg/l - 96 h
	LC ₅₀ Menidia peninsulae (silverside minnow)	32 mg/l - 96 h
CAS 84852-15-3	LC ₅₀ Lepomis macrochirus (bluegill)	0.1351 mg/l - 96 h
	LC ₅₀ Pimephales promelas (fathead minnow)	0.1383 mg/l - 96 h
	LC ₅₀ Pleuronectes americanus (winter flounder)	0.017 mg/l - 96 h
	EC ₅₀ Mulinia lateralis (Clam)	0.0379 mg/l - 48 h
CAS 9046-10-0	LC ₅₀ Oncorhynchus mykiss (rainbow trout)	15 mg/l - 96 h
	EC ₅₀ Daphnia	80 mg/l - 48 h

Persistence and degradability: Not readily biodegradable.

Bioaccumulative potential: No data available.

Mobility in soil: Adsorption to solid soil phase is possible for some ingredients but not enough data is available for the mixture.

Other adverse effects: No data available.

SECTION 13. DISPOSAL CONSIDERATIONS

Information on safe handling for disposal/methods of disposal/contaminated packaging: Dispose of contents/container into safe container in accordance with local, regional or national regulations.

SECTION 14. TRANSPORT INFORMATION

UN Number; Proper shipping name; Class(es); Packing group (PG) of the TDG Regulations:

UN3267; CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (isophorone diamine, 4-nonylphenol, branched); CLASS 8; PG III

UN Number; Proper shipping name; Class(es); Packing group (PG) of the IMDG (maritime):

UN3267; CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (isophorone diamine, 4-nonylphenol, branched); CLASS 8; PG III

UN Number; Proper shipping name; Class(es); Packing group (PG) of the IATA (air):

UN3267; CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (isophorone diamine, 4-nonylphenol, branched); CLASS 8; PG III

Special Precautions(transport/conveyance): None

Environmental hazards (IMDG or other): Marine Pollutant

Bulk transport (usually more than 450L in capacity): Possible.

SECTION 15. REGULATORY INFORMATION

Safety/health Canadian regulations specifics: Refer to section 2 for the appropriate classification. This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR).

Environmental Canadian regulations specifics: Refer to section 3 for ingredient(s) of the DSL.



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Safety/health/environmental outside regulations specifics: None

SECTION 16. OTHER INFORMATION

Date of latest revision of the safety data sheet: 14 September 2016

Disclaimer:

NOTICE TO READER:

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END OF S.D.S.