

Section 1: Identification of the substance and supplier

Product Name	UltraMender
Product Properties	Polymeric bitumen binder
Recommended Use	Cold mix binder in road maintenance
Company Details	Road Science
Address	345 Matakokiri Drive, Omanawa, Bay of Plenty 3110
Telephone Number	0800 180 200
Emergency Telephone Number	07 575 1150 24hr / 7 days or National Poisons Centre 0800 POISON (0800 764 766)

Section 2: Hazards identification

Hazard Classification	6.1D (Inhalation), 6.3A, 6.4A (Irritation to Eyes), 6.5B, 6.9B (Repeated Exposure) Diamonds: Toxic, Chronic Toxic Hazard Codes: H332, H315, H319, H317, H373. Harmful if inhaled. Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure. Prevention Codes: P102, P103, P260, P264, P271, P272, P280 Keep out of reach of children. Read label before use. Do not breathe fumes/vapours. Wash hands thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection Response Codes: If medical advice is needed, have product container or label at hand. 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. If skin irritation occurs: Get medical advice/ attention. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before re-use. If skin irritation or rash occurs: Get medical advice/ attention.
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Disposal Statement	Do not let this product enter the environment. Do not dispose of in waterways or sewers. Unwanted product should be poured out on newspaper or sawdust and allowed to cure and then disposed of as non-hazardous waste. Empty pouches should be left open in a well-ventilated area to cure then disposed of via domestic waste collection.
HSNO Approval Code	HSR002670; 2006 include subhaz

Section 3: Composition/Information on ingredients

Chemical Identity	Cas Number	Concentration
Polyurethane Prepolymer	Non DG	50 - 65%
Polymethylene polyphenylisocyanate	9016-87-9	30 - 40%
Propylene carbonate	108-32-7	< 10%
Non-hazardous materials		Balance

Section 4: First aid measures

Requirement for First Aid: Note to physician: TREAT SYMPTOMATICALLY. EFFECTS MAY BE DELAYED.

First Aid Instructions:

Swallowed: Wash mouth out with water. Do not induce vomiting. Seek medical attention.

Eye Contact. Immediately irrigate with copious quantities of water for at least 15 minutes. Eyelids to be held open. Remove clothing is contaminated and wash skin. Seek immediate medical assistance.

Skin: Wipe material from skin with cloth or absorbent paper. Wash contaminated skin with plenty of soap and water. Remove contaminated clothing and wash before re-use. If swelling, redness, blistering, or irritation occurs seek medical advice. Traces of cured material (after water contact) is not considered hazardous. Do NOT remove with solvent. Allow to peel off naturally or hasten by soaking in tepid to warm water.

Ingestion: Immediately rinse mouth with water. Give plenty

of water to drink. If vomiting occurs give further water. Seek medical assistance.

Inhalation: Remove victim from area of exposure - avoid becoming a casualty. 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.

Section 5: Fire fighting measures

Hazards from combustion:: On burning may emit toxic fumes including those of carbon oxides, nitrogen oxides, isocyanate vapours and hydrogen cyanide.

Fire-fighting advice: Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion

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

Section 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: Quickly wipe up material before it cures, with cloth or absorbent paper avoiding skin contact. Uncured material can be removed by using epoxy thinners with 10% meths added. Cured material can only be removed by abrasion.

For large spills: Wear protective equipment to prevent skin and eye contamination and inhalation of vapours. Scrape up material before it cures. Collect into properly labelled containers and seal once product has hardened for disposal. Wash area down with excess water. Cured material can only be removed by abrasion.

Section 7: Handling and storage

Precautions for Safe Handling: This product must not be sprayed or heated. Avoid skin and eye contact.

Conditions for Safe Storage: Store in a cool place and out of direct sunlight. Store away from acids, alcohols, oxidizing agents,

moisture and sources of heat or ignition. Keep dry, reacts with water; may lead to pouch rupture. Keep containers closed at all times, check regularly for leaks.

Section 8: Exposure control/Personal protection

Workplace Exposure Guidelines: No value assigned for this specific material by the New Zealand Occupational Safety and Health Service (OSH). However, Workplace Exposure Standard(s) for constituent(s): Isocyanates, all (as-NCO): TWA 0.02 mg/m³; STEL 0.07 mg/m³, sen, NZ As published by the New Zealand Occupational Safety and Health Service (OSH)

NZ Workplace Exposure Standards (WES):	TWA mg/m ³	STEL mg/m ³
	The eight-hour, time-weighted average exposure standard is designed to protect the worker from the effects of long-term exposure.	The 15 minute average exposure standard. Applies to any 15 minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both short-term and eight hour, time-weighted average exposures should be determined. Sen' Notice – sensitiser. The substance can cause a specific immune response in some people. An affected individual may subsequently react to exposure to minute levels of that substance. These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Engineering Controls: Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Exposure Standards. Use in well-ventilated area. Keep containers closed when not in use.

Personal Protective Equipment (PPE) Avoid skin and eye contact and inhalation of vapour or spray. Wear overalls, safety boots, full-

face visor and general purpose gloves (PVC). 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

Section 9: Physical and chemical properties

Physical State	Viscous liquid
Solubility in water	Not soluble
Specific Gravity	1.05 - 1.15
Flash Point	> 135 °C
Flammability Limits	Not available
Boiling Point / Range	Not available
Colour	black

Section 10: Stability and reactivity

Chemical Stability: Stable under normal conditions

Materials to Avoid: Avoid contact with foodstuffs

Incompatible Materials: Reacts with alcohols, acids, oxidizing agents and moisture

Section 11: Toxicological information

Eyes: An eye irritant.

Skin: Contact with skin may result in irritation. May cause skin sensitization in sensitive individuals. Repeated or prolonged skin contact may lead to allergic contact dermatitis. Animal studies have shown that respiratory sensitisation can be induced by skin contact with known respiratory sensitizers including diisocyanates.

Ingestion: Swallowing can result in nausea and abdominal pain

Inhalation: Repeated inhalation of vapour or spray mists at levels above the occupational exposure standard could cause respiratory sensitization. Symptoms may include irritation of the eyes, nose, throat and lungs, possibly with dryness of the throat, tightness of the chest and difficulty breathing. Onset of respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response may develop to even minimal concentrations of MDI in sensitized individuals.

There are reports that chronic exposure to isocyanates by

inhalation, may result in a permanent decrease in lung function.

Long term Effects: There are reports that chronic exposure to isocyanates by inhalation, may result in a permanent decrease in lung function.

Toxicological Data: No LD50 data available for the product. However, for constituent Polymethylene polyphenylisocyanate:

Acute Oral: low toxicity if swallowed, however swallowing large amounts may cause injury. LD50 rat > 10000 mg/kg

Acute Dermal: Prolonged skin contact is unlikely to result in absorption of harmful amounts. LD50 rabbit > 9400 mg/kg

Acute Inhalation: At room temperature vapours are minimal due to low volatility. However, certain operations may generate vapour or mist concentrations sufficient to cause respiratory inhalation and other adverse effects. Such operations include those in which the material is heated or sprayed. LC50 rat: 0.49 mg/l (respirable aerosols).

Section 12: Ecological information

Avoid contaminating waterways. This product is not classified as ecotoxic according to the criteria of HSNO. Ecological Data for

Polymethylene polyphenylisocyanate (MDI) Acute Toxicity to Fish LC50: > 1000 mg/l (Zebra fish (Brachydanio rerio), 96 h)

Section 13: Disposal considerations

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Section 14: Transport information

UN Number	Not classified as Dangerous for transport
UN Proper Shipping Name	None allocated
Class	None allocated
Subsidiary Risk	None allocated
Packing Group	None allocated
Hazchem Code	None allocated

Section 15: Regulatory information

HSNO Approval Code	HSR002670
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Section 16: Other information

Revision Indicator

Issued: April 2017
 Revised: June 2018
 August 2026

Key Legend

ERMA – Environmental Risk Management Authority
 IARC – International Agency for Research on Cancer
 IBP – Initial Boiling Point
 HSNO – Hazardous Substances and New Organisms Act
 PMB – Polymer Modified Bitumen
 RNZ – Roading New Zealand
 UN Number – United Nations Number
 WES – Workplace Exposure Standards

Need more information? At Road Science, we're committed to providing innovative solutions backed by engineering expertise. If you have any questions about this product, need technical guidance, or want to discuss how it fits your specific project needs, our team is here to help. Contact us today for expert advice and tailored support. Contact us via **0800 180 200** or visit our website at **roadscience.co.nz** to learn more.

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