

SAFETY DATA SHEET

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CAS No

Date Issued

15/Oct/2024

Ultrathane 500B135

1.Product and Company Identification:

<u>Trade / Commercial Name</u>	Ultrathane 500B135
<u>Chemical Name</u>	Isocyanates, toxic, N.O.S.
<u>Formula</u>	Isocyanate prepolymer
<u>Chemical Family</u>	Isocyanates
<u>Synonyms</u>	Ultrathane, isocyanate component - Use: Clear elastomer component for doming applications
<u>Un No</u>	2206
<u>ERG No.</u>	155
	<u>Hazchem Code</u>
	<u>EAC</u>

2.Hazards Identification:

GHS Classification according to SANS 10234: 2019):

Acute toxicity (Inhalation - Vapour)	Category 3 (H331)
Skin corrosion/irritation	Category 2 (H315)
Eye damage/eye irritation	Category 2A (H319)
Respiratory sensitizer	Category 1 (H334)
Skin sensitizer	Category 1 (H317)
Specific target organ toxicity, single exposure	Category 3 (H335)
Aquatic toxicity (Chronic)	Category 3 (H412)

Label elements:

SYMBOL: Skull and crossbones, Health hazard



Signal word: DANGER

Hazard statements:

- H331: Toxic if inhaled
- H315: Causes skin irritation
- H319: Causes serious eye irritation
- H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H317: May cause an allergic skin reaction
- H335: May cause respiratory irritation
- H412: Harmful to aquatic life with long lasting effects

Precautionary statements (Prevention):

- P260: Do not breathe vapours
- P271: Use only outdoors or in well-ventilated area
- P264: Wash exposed skin thoroughly after handling
- P280: Wear protective gloves/protective clothing/eye protection/face protection
- P284: In case of inadequate ventilation, wear respiratory protection
- P272: Contaminated work clothing should not be allowed out of the workplace
- P273: Avoid release into environment

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Precautionary statements (Response):

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P311: Call a doctor if you feel unwell.

P302+P352: IF ON SKIN: Wash with plenty of soap and water

P333+P313: If skin irritation or rash occurs: 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. Continue rinsing.

P337+P313: If eye irritation persists: Get medical advice/attention

P342+311: If experiencing respiratory symptoms: Call a doctor.

P362: Take off contaminated clothing and wash before re-use

Precautionary statements (Storage):

P403+P233: Store in a well-ventilated place and keep the container tightly closed.

P405: Store locked up

Precautionary statements (Disposal):

P501: Dispose of contents/container in accordance with local regulations

Contains Isophorone diisocyanate (CAS No.: 4098-71-9) 30 - 35 %

3.Composition:

Hazardous Components

Type of product: Mixture

Mixture of below with non-hazardous additions:

Isophorone diisocyanate (CAS No.: 4098-71-9) 30 - 35 %

4.First Aid Measures

First Aid Skin

Remove & isolate contaminated clothing and shoes. For minor skin contact, avoid spreading material on unaffected skin. Flush body with plenty of water and soap for at least 5 minutes. Seek medical advice in the event of a skin reaction.

First Aid Eyes

Flush eyes with lukewarm water for 20 minutes. Hold eyelids open while washing. Seek medical advice.

First Aid Ingested

Do not induce vomiting. Seek medical assistance.

First Aid Inhalation

Move victim to fresh air and keep him warm, let him rest. If there is difficulty in breathing, seek medical advice. Effects of exposure may be delayed.

Notes to physician: The product irritates the respiratory tract and may trigger sensitisation of the skin and respiratory tract. Treatment of acute irritation and bronchial constriction is primarily symptomatic. Extended medical treatment may be required depending on the degree of exposure and the severity of the symptoms.

5.Fire Fighting Measures

Suitable extinguishing media: CO₂, foam, extinguishing powder.

Large Fires: Use water spray.

Unsuitable extinguishing media: High volume water jet.

Under fire conditions, carbon oxides, oxides of nitrogen, isocyanate vapours and traces of hydrogen cyanide are emitted. Do not breathe fumes from fire.

Reacts with water, releasing carbon dioxide. May cause excessive pressure in confined areas or in closed containers.

Fire in the vicinity poses a risk of pressure build-up and rupture of containers.

Move containers from fire area if you can do so without risk.

Do not get water inside containers.

Cool containers with flooding quantities of water until well after fire is out.

Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate enclosed areas.

Wear positive pressure self-contained breathing apparatus (SCBA) and protective clothing.

Do not allow contaminated extinguishing water to enter soil, drains or surface waters.

6.Accidental Release Measures

Put on protective equipment, including breathing apparatus.

Product will react with water and produce a solid polymer and carbon dioxide, the solid polymer is an insoluble product (polyurea).

Cover with damp, fluid-binding material (sand, sawdust or chemical binder based on calcium silicate hydrate)

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Transfer to waste container after approx. 1 hour (CO₂ formation). Keep damp and in the open air in a safe place for 7 to 14 days.

PRECAUTIONS:

Restrict access to area.

Provide adequate protective equipment and ventilation.

Remove sources of heat and flame.

Notify occupational and environmental authorities.

SPILL OR LEAK:

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

All equipment used when handling the product must be grounded.

Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Stop leak if you can do so without risk.

A vapour suppressing foam may be used to reduce vapours.

DO NOT GET WATER inside containers.

Prevent entry into waterways, sewers, basements or confined areas.

Small Spills:

Cover with earth, sand or other non-combustible material followed with plastic sheet to minimize spreading.

Use clean non-sparking tools to collect material and place it into loosely covered plastic containers for later disposal.

A 3 % protein-based foam can be sprayed over the material to reduce vapours until an effective decontamination material can be obtained.

Use a solution of 8 - 10 % sodium carbonate and 2 % liquid soap in water to decontaminate and to convert the residue into harmless polyurea polymer and carbon dioxide.

7.Handling And Storage

Handling:

Provide sufficient air exchange and/or exhaust ventilation in the working area.

In all areas where isocyanate vapour concentrations are produced in elevated concentrations, exhaust ventilation must be provided in such a way that the workplace exposure limit is not exceeded.

The air should be drawn away from the personnel handling the product.

Avoid contact with skin and eyes.

Do not breathe vapours.

Keep away from foodstuffs, drink and tobacco.

Wash hands before breaks and at the end of shifts.

Take off all contaminated clothing immediately.

Storage:

Keep containers tightly closed and dry.

Store in an area that is dry, sheltered and well ventilated.

8.Exposure Controls/Personal Protection

Occupational Exposure Limits

Values for Isophorone diisocyanate:

TWA OEL-RL: 0.005 ppm

Short term OEL-RL: 0.02 mg/m³

SENSITISER

Controls

The control measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure.

The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release.

Use a non-sparking, grounded ventilation system separate from other exhaust ventilation systems. Exhaust directly to the outside.

Supply sufficient replacement air to make up for air removed.

Have a safety shower/eye wash fountain readily available in the immediate work area

Personal Protection

If engineering controls and work practices are not effective in controlling this material, then wear suitable personal protection equipment, including chemical safety goggles & face shield, boots, impervious gloves, coveralls & respiratory protection.

Respiratory protection: Air-fed mask or a combination of charcoal filter and particulate filter.

For their own protection, persons who suffer from hypersensitivity of the respiratory tract (e.g. asthmatics and chronic bronchitis sufferers) should avoid handling this product.

Symptoms affecting the respiratory tract can also occur several hours after overexposure.

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Hand protection:

PVC protective gloves, > 0,5 mm thickness

Polychloroprene - CR, >= 0,5 mm thickness

Nitrile rubber - NBR, >= 0,35 mm thickness

Butyl rubber - IIR, >= 0,5 mm thickness

Fluorinated rubber - FKM, >= 0,4 mm thickness

Natural rubber: - NR, >= 0,5 mm thickness

All gloves breakthrough time >= 480 min

Contaminated gloves should be disposed of.

Eye protection: Safety goggles/face protection

Skin and body protection: Wear suitable overalls.

Keep away from foodstuffs, drinks and tobacco.

Store working clothes separately.

Wash hands before breaks and at end of work.

Decontaminate, destroy and dispose of soiled protective clothing (see section13)

Have appropriate equipment available for use in emergencies.

9.Physical & Chemical Properties

Clear, water white, low viscosity liquid with pungent odour

Viscosity: 350 - 750 cps @ 25°C

S.G.: 1,10 (± 0,02) @ 25°C

pH: Not applicable

Water solubility: Reacts with water

Physical & chemical properties for Isophorone diisocyanate (Not tested for the preparation):

Melting point: ± - 60°C

Boiling point: ± 158°C

Vapour pressure: ± 0,0012 hPa at 25°C

Saturation concentration of vapour: 3.65 mg/m³ at 20°C

Flash point: ± 155°C

Ignition temperature: ± 430°C

10.Stability And Reactivity

Conditions to Avoid

Extreme heat, open flame, moisture

Incompatible Materials

Exothermic reaction with amines and alcohol.

Reacts slowly with water to form carbon dioxide, in closed containers risk of bursting owing to increased pressure.

Other

Hazardous decomposition materials: Oxides of nitrogen, oxides of carbon

Polymerisation may occur at ± 260°C with evolution of CO₂.

11.Toxicological Information

Toxicological information for Isophorone diisocyanate:

Effects of acute exposure:

Acute eye irritation: Severely irritating (Rabbit)

Risk of serious damage to eyes.

Acute skin irritation: Severely irritating, sensitising

Acute dermal toxicity: LD50 (rat) > 7 000 mg/kg

Acute respiratory irritation: Severely irritating

Acute inhalation toxicity: LC50 (rat, 4 hours): 0,04 mg/l Aerosol

Sensitising to the respiratory tract

Acute oral toxicity: LD50 (rat): 4 814 mg/kg

Effects of chronic exposure:

STOT repeat exposure: Not classified as a specific target organ toxicant

No aspiration toxicity classification.

May cause sensitisation by inhalation and skin contact.

Overexposure entails the risk of concentration dependant irritation of the eyes, nose, throat and respiratory tract. Symptoms may be delayed and development of hypersensitivity is possible (respiratory symptoms, cough, asthma).

Tanning and other irritating effects may occur after long and repeated periods of exposure to skin.

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Carcinogenicity: Not determined

Mutagenicity: No mutagenic effects in animal testing

Teratogenicity: No evidence of teratogenic properties

Reproductive toxicity: No data available

12. Ecological Information

Ecotoxicological information for Isophorone diisocyanate:

EC50 (Daphnia - 48 hours): 35 mg/l

LC0 (fish - Danio rerio. - 96 hours) > 72.3 mg/l

Not biodegradable

Bacterial toxicity: EC50 263 mg/l (Activated sludge - 3 hours)

Toxicity for algae: > 70 mg/l (Scenedesmus subspicatus - 72 hours)

The product reacts with water at the interface, forming CO₂ and a solid insoluble product with a high melting point (polyurea). This reaction is accelerated by surfactants (e.g. detergents) or by water soluble solvents. Previous experience has shown that polyurea is inert and non-degradable.

13. Disposal Considerations

Disposal Method Product

Chemical residues generally count as special waste.

We recommend that you contact the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste.

Disposal Method Packaging

Disposal in accordance with local legal provisions.

May be turned into scrap or reconditioned after the contents have been completely removed, any residue adhering to the walls neutralised and the labels removed.

14. Transport Information

UN No

2206

ERG No.

155

EAC

IMDG-Shipping Name

ISOCYANATES, TOXIC, N.O.S.

IMDG Code

6.1

IMDG-Packaging Group

III

Marine Pollutant

No

Class

Class: 6.1 Poison Group: III

Subsidiary Risks

None

15. Regulatory Information

EEC Hazard Classification

6.1

Risk Phrases

Toxic by inhalation, in contact with skin and if swallowed

May cause sensitisation by inhalation and skin contact

Harmful to aquatic organisms; may cause long-term adverse effects in the aquatic environment

Safety Phrases

Keep locked up and out of reach of children

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

After contact with skin, wash immediately with plenty of water and soap.

In case of insufficient ventilation, wear suitable respiratory equipment.

In case of accident or if you feel unwell, seek medical advice immediately and show the label where possible.

Avoid release into environment; refer to special instructions/material safety data sheet

National Legislation

Republic of South Africa:

National Road Traffic Act 1996 (Act 93 of 1996)

Occupational Health and Safety Act 1993 (Act 85 of 1993)

Hazardous Substances Act 1973 (Act 15 of 1973)

SANS 10234: 2019

European Community:

Directive 1907/2006/EC

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16.Other Information

Reason for alteration: GHS Classification according to SANS 10234: 2019

Sources: Suppliers Material Safety Data Sheets for hazardous component

SANS 10234: 2008

The information contained herein is based on the present state of our knowledge.

It characterizes the product with regard to the appropriate safety precautions.

It does not represent a guarantee of the properness of the product.

Date issued: 19/01/2004

Revision date: 15/10/2024

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