

SAFETY DATA SHEET



Date of issue : 18 August 2023

Version : 6

Section 1. Identification

Product code : 0779B/1L

Product name : CAPRINAMEL HARDENER

Product type : Liquid.

Recommended use and restrictions

Use of the substance/
mixture : Coating.

Uses advised against : Not applicable.

Supplier's details : PPG INDUSTRIES NEW ZEALAND LTD
5 MONAHAN ROAD, MT WELLINGTON,
AUCKLAND
www.ppgnz.co.nz

Telephone Numbers:
09 573 1620, 0800 659378
021 940 920 (24 Hours)

Emergency telephone
number (with hours of
operation) : New Zealand 0800 000 096 (24 hours) / Australia 1800 883 254 (24 hours)
For international shipping emergencies: 1-412-391-1618

e-mail address of person
responsible for this SDS : ehsnz@ppg.com

Section 2. Hazards identification

HSNO Classification : FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2
RESPIRATORY SENSITISATION - Category 1
SKIN SENSITISATION - Category 1
CARCINOGENICITY - Category 2
REPRODUCTIVE TOXICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 2
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3


Symbol :



GHS label elements

Signal word : Danger

Section 2. Hazards identification

Hazard statements :  Highly flammable liquid and vapour.
Harmful if swallowed or if inhaled.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
May cause damage to organs.
May cause damage to organs through prolonged or repeated exposure.
Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Wear respiratory protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid release to the environment. Do not breathe vapour. Wash thoroughly after handling.

Response : IF exposed or concerned: Call a POISON CENTER or doctor. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. If experiencing respiratory symptoms: Call a POISON CENTER or doctor. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. 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 or attention.

Storage : Not applicable.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : Prolonged or repeated contact may dry skin and cause irritation.

This material is classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Notice 2017 and has been classified according to the Hazardous Substances (Classifications) Notice 2017.


This material is classified as DANGEROUS GOODS according to criteria in New Zealand Land Transport Rule: Dangerous Goods 2005.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

CAS number/other identifiers

Product code : 0779B/1L

Hazardous ingredients	%	CAS number
 Hexamethylene diisocyanate, oligomers	30 - 60	28182-81-2
toluene	10 - <30	108-88-3
3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers (isocyanurate type)	1 - <10	53880-05-0 (EC 931-312-3)
n-butyl acetate	1 - <10	123-86-4
2-methoxy-1-methylethyl acetate	1 - <10	108-65-6
Solvent naphtha (petroleum), light aromatic	1 - <10	64742-95-6
xylene	1 - <10	1330-20-7
ethylbenzene	<1	100-41-4
dibutyltin dilaurate	<1	77-58-7

Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment or have an OEL and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : May cause damage to organs following a single exposure in contact with skin. Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed. May cause damage to organs following a single exposure if swallowed.

Over-exposure signs/symptoms

- Eyes** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
wheezing and breathing difficulties
asthma
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Skin** : Adverse symptoms may include the following:
irritation
redness
dryness
cracking
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Section 4. First aid measures

- Specific treatments** : Not available.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

- Suitable** : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Specific hazards arising from the chemical** : Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon oxides
nitrogen oxides
Cyanate and isocyanate.
hydrogen cyanide
- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

- Personal precautions, protective equipment and emergency procedures** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
- Special provisions** : Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Place in a suitable container. The contaminated area should be cleaned immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts) and concentrated (d: 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts) and water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in an unsealed container. Once this stage is reached, close container and dispose of according to local regulations (see section 13). Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

Section 7. Handling and storage

- Precautions for safe handling** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitisation problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Conditions for safe storage, including any incompatibilities** : Do not store above the following temperature: 50°C (122°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Precautions should be taken to minimise exposure to atmospheric humidity or water. CO₂ will be formed, which, in closed containers, could result in pressurisation.

Section 8. Exposure controls/personal protection

Control parameters

Ingredient name	Exposure limits
Hexamethylene diisocyanate, oligomers	<p>HSWA 2015 - HSW (GRWM) 2016. Workplace exposure standards (WES) (New Zealand, 4/2022). [isocyanates, all (as -NCO)] Skin sensitiser. Inhalation sensitiser.</p> <p>WES-TWA: 0.02 mg/m³, (measured as -NCO) 8 hours. Form: The Inhalable Fraction and Vapour (ifv) notation is used when a material exerts sufficient vapour pressure such that it may be present in both particle and vapour phases, with each contributing to a significant portion of exposure.</p> <p>WES-STEL: 0.07 mg/m³, (measured as -NCO) 15 minutes. Form: The Inhalable Fraction and Vapour (ifv) notation is used when a material exerts sufficient vapour pressure such that it may be present in both particle and vapour phases, with each contributing to a significant portion of exposure.</p>
toluene	<p>HSWA 2015 - HSW (GRWM) 2016. Workplace exposure standards (WES) (New Zealand, 4/2022). Absorbed through skin.</p> <p>WES-TWA: 75 mg/m³ 8 hours. WES-TWA: 20 ppm 8 hours. WES-STEL: 377 mg/m³ 15 minutes. WES-STEL: 100 ppm 15 minutes.</p>
n-butyl acetate	<p>HSWA 2015 - HSW (GRWM) 2016. Workplace exposure standards (WES) (New Zealand, 4/2022).</p> <p>WES-STEL: 950 mg/m³ 15 minutes. WES-STEL: 200 ppm 15 minutes. WES-TWA: 713 mg/m³ 8 hours. WES-TWA: 150 ppm 8 hours.</p>
2-methoxy-1-methylethyl acetate	<p>Safe Work Australia (Australia, 10/2022). Absorbed through skin.</p> <p>STEL: 548 mg/m³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 274 mg/m³ 8 hours. TWA: 50 ppm 8 hours.</p>
xylene	<p>HSWA 2015 - HSW (GRWM) 2016. Workplace exposure standards (WES) (New Zealand, 4/2022). [xylene (o-, m-, p-isomers)]</p> <p>WES-TWA: 217 mg/m³ 8 hours. WES-TWA: 50 ppm 8 hours.</p>
ethylbenzene	<p>HSWA 2015 - HSW (GRWM) 2016. Workplace exposure standards (WES) (New Zealand, 4/2022). Absorbed through</p>

Section 8. Exposure controls/personal protection

dibutyltin dilaurate

skin.

WES-STEL: 176 mg/m³ 15 minutes.

WES-STEL: 40 ppm 15 minutes.

WES-TWA: 88 mg/m³ 8 hours.

WES-TWA: 20 ppm 8 hours.

HSWA 2015 - HSW (GRWM) 2016.

**Workplace exposure standards (WES)
(New Zealand, 4/2022). [tin, organic
compounds as Sn] Absorbed through
skin.**

WES-STEL: 0.2 mg/m³, (as Sn) 15 minutes.WES-TWA: 0.1 mg/m³, (as Sn) 8 hours.

- Recommended monitoring procedures** : Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Respiratory protection** : Use an air-fed respirator unless a site-specific assessment determines that an air-fed respirator is not necessary, in which case the results of the risk assessment should be utilized to determine whether respiratory protection is necessary and what type of protection is appropriate. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Gloves** : butyl rubber
- Eye protection** : Chemical splash goggles.
- Skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 8. Exposure controls/personal protection

Restrictions on use : Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.
Colour : Clear.
Odour : Not available.
Odour threshold : Not available.
pH : Not applicable.
Melting point : Not available.
Boiling point : 111°C (231.8°F)
Flash point : Closed cup: 4°C (39.2°F)
Flammability (solid, gas) : Not available.
Lower and upper explosive (flammable) limits : Not available.
Vapour pressure : Not available.
Relative density : 1.04
Bulk Density (g/cm³) : 1.036

Media	Result
cold water	Not soluble

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C (104°F)): >21 mm²/s (>21 cSt)

Section 10. Stability and reactivity

Stability : The product may not be stable under certain conditions of storage or use.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Uncontrolled exothermic reactions occur with amines and alcohols. The product reacts slowly with water, resulting in the production of carbon dioxide. In closed containers, pressure build-up could result in distortion, expansion and, in extreme cases, bursting of the container.

Incompatible materials : Reactive or incompatible with the following materials:
 oxidising materials
 strong acids
 strong alkalis

Hazardous decomposition products : Depending on conditions, decomposition products may include the following materials: Cyanate and isocyanate. carbon oxides nitrogen oxides hydrogen cyanide

Section 10. Stability and reactivity

Hazardous polymerisation : Under normal conditions of storage and use, hazardous polymerisation will not occur.

Section 11. Toxicological information

Information on likely routes of exposure

- Inhalation** : Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Ingestion** : Harmful if swallowed. May cause damage to organs following a single exposure if swallowed.
- Skin contact** : May cause damage to organs following a single exposure in contact with skin. Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
- Eye contact** : Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

- Inhalation** : Adverse symptoms may include the following:
wheezing and breathing difficulties
asthma
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
dryness
cracking
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Hexamethylene diisocyanate, oligomers	LD50 Dermal	Rabbit	>2000 mg/kg	-
toluene	LD50 Oral	Rat - Female	>2500 mg/kg	-
	LC50 Inhalation Vapour	Rat	49 g/m ³	4 hours
	LD50 Dermal	Rabbit	8.39 g/kg	-
	LD50 Oral	Rat	5580 mg/kg	-
3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers (isocyanurate type)	LC50 Inhalation Dusts and mists	Rat	>5010 mg/m ³	4 hours
n-butyl acetate	LD50 Oral	Rat	>14 g/kg	-
	LC50 Inhalation Vapour	Rat	>21.1 mg/l	4 hours

Section 11. Toxicological information

2-methoxy-1-methylethyl acetate	LC50 Inhalation Vapour	Rat	2000 ppm	4 hours
	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	10.768 g/kg	-
	LC50 Inhalation Vapour	Rat	30 mg/l	4 hours
Solvent naphtha (petroleum), light aromatic	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	6190 mg/kg	-
	LD50 Dermal	Rabbit	3.48 g/kg	-
xylene	LD50 Oral	Rat	8400 mg/kg	-
	LD50 Dermal	Rabbit	1.7 g/kg	-
ethylbenzene	LD50 Oral	Rat	4.3 g/kg	-
	LC50 Inhalation Vapour	Rat	17.8 mg/l	4 hours
dibutyltin dilaurate	LD50 Dermal	Rabbit	17.8 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-
	LD50 Oral	Rat	2071 mg/kg	-

Conclusion/Summary : There are no data available on the mixture itself.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
xylene	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-

Conclusion/Summary

Skin : There are no data available on the mixture itself.

Eyes : There are no data available on the mixture itself.

Respiratory : There are no data available on the mixture itself.

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers (isocyanurate type)	skin	Guinea pig	Sensitising

Conclusion/Summary

Skin : There are no data available on the mixture itself.

Respiratory : There are no data available on the mixture itself.

Potential chronic health effects

General : May cause damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Inhalation : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Skin contact : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Suspected of damaging the unborn child.

Section 11. Toxicological information

Developmental effects : No known significant effects or critical hazards.

Fertility effects : Suspected of damaging fertility.

Chronic toxicity

Not available.

Carcinogenicity

Conclusion/Summary : There are no data available on the mixture itself.

Mutagenicity

Conclusion/Summary : There are no data available on the mixture itself.

Teratogenicity

Conclusion/Summary : There are no data available on the mixture itself.

Reproductive toxicity

Conclusion/Summary : There are no data available on the mixture itself.

Specific target organ toxicity

Name	Category	Route of exposure	Target organs
toluene	Category 2	inhalation	-
xylene	Category 2	-	-
ethylbenzene	Category 2	inhalation	-
dibutyltin dilaurate	Category 1	oral	-

Aspiration hazard

Name
Solvent naphtha (petroleum), light aromatic

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	1334.32 mg/kg
Dermal	85424.8 mg/kg
Inhalation (vapours)	36.44 mg/l
Inhalation (dusts and mists)	2.67 mg/l

Other information :

Prolonged or repeated contact may dry skin and cause irritation. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapour/ aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Based on the properties of the isocyanate components and considering toxicological data on similar mixtures, this mixture may cause acute irritation and/or sensitisation of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitised persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Persons with a history of skin sensitisation problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Repeated exposure may lead to permanent respiratory disability. Moisture-sensitive material. Avoid contact with skin and clothing.

Section 12. Ecological information

Ecotoxicity : This material is harmful to aquatic life with long lasting effects.

Aquatic and terrestrial toxicity

Product/ingredient name	Result	Species	Exposure
Hexamethylene diisocyanate, oligomers	Acute EC50 >1000 mg/l	Algae - <i>scenedesmus subspicatus</i>	72 hours
n-butyl acetate	Acute EC50 >100 mg/l	Daphnia - <i>daphnia magna</i>	48 hours
2-methoxy-1-methylethyl acetate	Acute LC50 >100 mg/l	Fish - <i>Danio rerio (zebra fish)</i>	96 hours
Solvent naphtha (petroleum), light aromatic	Acute LC50 18 mg/l	Fish	96 hours
ethylbenzene	Acute LC50 134 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
dibutyltin dilaurate	Acute LC50 8.2 mg/l	Fish	96 hours
	Acute EC50 1.8 mg/l Fresh water	Daphnia	48 hours
	Chronic NOEC 1 mg/l Fresh water	Daphnia - <i>Ceriodaphnia dubia</i>	-
	EC50 0.463 mg/l	Daphnia	48 hours

Persistence/degradability

Product/ingredient name	Test	Result	Dose	Inoculum
n-butyl acetate	TEPA and OECD 301D	83 % - Readily - 28 days	-	-
2-methoxy-1-methylethyl acetate	-	83 % - Readily - 28 days	-	-
ethylbenzene	-	79 % - Readily - 10 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Hexamethylene diisocyanate, oligomers	-	-	Not readily
toluene	-	-	Readily
n-butyl acetate	-	-	Readily
2-methoxy-1-methylethyl acetate	-	-	Readily
xylene	-	-	Readily
ethylbenzene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Hexamethylene diisocyanate, oligomers	5.54	3.2	Low
toluene	2.73	8.32	Low
n-butyl acetate	2.3	-	Low
2-methoxy-1-methylethyl acetate	1.2	-	Low
xylene	3.12	7.4 to 18.5	Low
ethylbenzene	3.6	79.43	Low
dibutyltin dilaurate	4.44	-	High

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Do not allow to enter drains or watercourses.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.




Not suitable:

: Do not allow to enter drains or watercourses.

The classification of the product may meet the criteria for a hazardous waste. Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14. Transport information

	NZ	IMDG	IATA
UN number	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT
Transport hazard class(es)	3 	3 	3 
Packing group	II	II	II
Environmental hazards	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.

Additional information

NZ : None identified.

Hazchem code : •3YE

IMDG : None identified.

IATA : None identified.

14. Transport information

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not applicable.

Section 15. Regulatory information

New Zealand Inventory of Chemicals (NZIoC) : All components are listed or exempted.

HSNO Approval Number : HSR002669 Flammable, Toxic [6.7]

Emergency Management Regulations : Level 1: Labelling required when 1L is present in a workplace.

Level 2: MSDS required when any amount is present in a workplace. At least 2 x 4.5 kg powder fire extinguishers required when 250L is present in a workplace.

Level 3: Emergency Response Plans and Secondary Containment required when 1000L is stored.

Flammable Signage required when 250L is present in a workplace.

Toxic Signage required when 10000L is present in a workplace.

Classes 1 to 5 Control Regulations : Hazardous Atmosphere Zones required for quantities greater than: 100L (closed), 25L (decanting), 5L (open occasionally), 1L (open continuously). Hazardous Substances Location Certificate required for quantities greater than: 250L (containers up to 5L), 100L (containers >5L), 50L (open containers).

Approved Handler : Yes - For quantities greater than 500L in containers up to 5L; or 250 L in containers >5L.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Section 16. Other information

Date of issue : 18 August 2023

Date of previous issue : 11/8/2021

Indicates information that has changed from previously issued version.

Key to abbreviations : STEL = Short Term Exposure Limit
TWA = Time-Weighted Average
WES = Work Exposure Standard

References : Not available.

Organisation that prepared the SDS : EHS

Disclaimer

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