RAPTOR LINER - TINTABLE

Safety Data Sheet

according to the Work Health and Safety (WHS) Regulations
Issue date: 9/01/2017 Revision date: 13/07/2021 Supersedes: 26/08/2020 Version: 5.1

SECTION 1: Product identifier

1.1. GHS Product identifier

Product form : Mixture
Trade name : RAPTOR LINER - TINTABLE
Product code : RLT/1

1.2. Other means of identification

Other means of identification : Component of: RLT/S1, RLT/S4

1.3. Recommended use of the chemical and restrictions on use

Recommended use : Coating
Restrictions on use : Consumer uses: Private households (= general public = consumers)

1.4. Details of manufacturer or importer

Supplier
U-POL Australia Pty Limited Ltd
55 Leland Street
Penrith NSW 2750
Australia
T 02 4731 2655 - F 02 4731 2611
info@u-pol.com.au - www.u-pol.com

Supplier
U-POL New Zealand Limited Ltd
c/o Lindsay & Associates Unit H, 12 Amera Place, East Tamaki
Manukau City Auckland 2013
New Zealand
T + 612 4731 2655 / 027 630 3691 - F + 612 4731 2611
info@u-pol.co.nz - www.u-pol.com

1.5. Emergency phone number

Emergency number : Australia (CHEMTREC): + (61) - 290372994 ; New Zealand (National Poisons Centre): 0800 764 766

SECTION 2: Hazard identification

2.1. Classification of the hazardous chemical

Classification according to the model Work Health and Safety Regulations (WHS Regulations)

Flammable liquids, Category 2	H225
Skin corrosion/irritation, Category 3	H316
Serious eye damage/eye irritation, Category 2A	H319
Skin sensitisation, Category 1	H317
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336

2.2. GHS Label elements, including precautionary statements

Hazard pictograms (GHS AU) :

Flame — Exclamation mark

Signal word (GHS AU) : Danger
Contains : acetone (10 – 30 %); n-butyl acetate (< 10 %); reaction mass of α-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene) (< 10 %); reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (< 10 %)
Hazard statements (GHS AU) : H225 - Highly flammable liquid and vapour
H316 - Causes mild skin irritation
H317 - May cause an allergic skin reaction

		H319 - Causes serious eye irritation H336 - May cause drowsiness or dizziness
Precautionary statements (GHS AU)	:	P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. heat, hot surfaces, open flames, sparks P261 - Avoid breathing fume, spray, vapours. P264 - Wash hands thoroughly after handling. P280 - Wear face protection, protective gloves, protective clothing. P337+P313 - If eye irritation persists: Get medical attention. P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

SECTION 3: Composition and information on ingredients

Name	CAS-No.	%	Classification according to the model Work Health and Safety Regulations (WHS Regulations)
acetone	67-64-1	10 – 30	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Other substances (not contributing to the classification of this product)	-	82.58	-

SECTION 4: First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general	:	Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation	:	Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	:	Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	:	Rinse eyes with water as a precaution.
First-aid measures after ingestion	:	Call a poison center or a doctor if you feel unwell.

4.2. Symptoms caused by exposure

Symptoms/effects	:	May cause drowsiness or dizziness.
Symptoms/effects after skin contact	:	May cause an allergic skin reaction.

4.3. Medical attention and special treatment

Other medical advice or treatment	:	Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Dry sand. Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

Fire hazard	:	Highly flammable liquid and vapour.
Hazardous decomposition products in case of fire	:	Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting	:	Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Hazchem Code	:	* 3YE

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Gloves. Safety glasses. Protective clothing.

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe vapours. No open flames, no sparks, and no smoking. Avoid breathing vapours, fume, spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and materials for containment and cleaning up

For containment : Collect spillage. Contain released product.

Methods for cleaning up : Take up liquid spill into absorbent material. This material and its container must be disposed of in a safe way, and as per local legislation. Notify authorities if product enters sewers or public waters.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Keep away from Heat and ignition sources. No smoking.

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing vapours, fume, spray. Avoid contact with skin and eyes.

Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Storage temperature : < 25 °C

Storage area : Store in well ventilated area.

Special rules on packaging : Keep only in original container.

SECTION 8: Exposure controls and personal protection

8.1. Control parameters - exposure standards

acetone (67-64-1)	
Australia - Occupational Exposure Limits	
Local name	Acetone
OES TWA [1]	1185 mg/m³
OES TWA [2]	500 ppm
OES STEL	2375 mg/m³
OES STEL [ppm]	1000 ppm

acetone (67-64-1)	
Regulatory reference	Workplace exposure standards for airborne contaminants (2019)
New Zealand - Occupational Exposure Limits	
Local name	Acetone
WES-TWA (OEL TWA) [1]	1185 mg/m³
WES-TWA (OEL TWA) [2]	500 ppm
WES-STEL (OEL STEL)	2375 mg/m³
WES-STEL (OEL STEL) [ppm]	1000 ppm
Regulatory reference	Workplace Exposure Standards and Biological Exposure Indices, 12th Edition
New Zealand - Biological Exposure Indices	
Local name	Acetone
BEI	50 mg/l Parameter: Acetone - Medium: Urine - Sampling time: End of shift
Regulatory reference	Workplace Exposure Standards and Biological Exposure Indices, 12th Edition

8.2. Biological Monitoring

No additional information available

8.3. Engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

8.4. Individual protection measures, such as personal protective equipment (PPE)

Personal protective equipment : Gas mask. Gloves. Protective clothing. Safety glasses.
Materials for protective clothing : Impermeable clothing
Hand protection : Protective gloves
Eye protection : Safety glasses
Skin and body protection : Wear suitable protective clothing
Respiratory protection : Air-fed respiratory protective equipment should be worn when this product is sprayed

Personal protective equipment symbol(s)

Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

Physical state : Liquid
Appearance : Viscous. Liquid. Cloudy.
Colour : light brown
Odour : Acetone odour
Odour threshold : No data available
pH : No data available
Relative evaporation rate (butylacetate=1) : No data available
Melting point / Freezing point : Melting point: Not applicable
Boiling point : > 35 °C
Flash point : -17 °C Acetone
Auto-ignition temperature : No data available
Flammability : No data available
Vapour pressure : No data available
Relative density : No data available
Density : Density: 1.12 (1.1 – 1.14) g/cm³
Solubility : insoluble in water. soluble in most organic solvents.

Partition coefficient n-octanol/water (Log Pow)	:	No data available
Viscosity, kinematic	:	8482.143 mm²/s
Viscosity, dynamic	:	9500 (8000 – 11000) cP (20ºC)
Explosive properties	:	No data available
Explosive limits	:	No data available
Minimum ignition energy	:	No data available
VOC content	:	417 g/l
VOC content - Regulatory	:	No data available
Percent Solids	:	63.01 wt%

SECTION 10: Stability and reactivity

Reactivity	:	Highly flammable liquid and vapour.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reactions known under normal conditions of use.
Conditions to avoid	:	No flames, no sparks. Eliminate all sources of ignition. Avoid contact with hot surfaces. Heat.
Incompatible materials	:	No additional information available
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified

acetone (67-64-1)	
LD50 oral rat	5800 mg/kg bodyweight Animal: rat, Animal sex: female
LD50 dermal rabbit	> 15800 mg/kg bodyweight (24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	76 mg/l air Animal: rat, Animal sex: female, 95% CL: 65,2 - 88,4
ATE AU (oral)	5800 mg/kg bodyweight

Skin corrosion/irritation	:	Causes mild skin irritation.
Serious eye damage/irritation	:	Causes serious eye irritation.
Respiratory or skin sensitisation	:	May cause an allergic skin reaction.
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
STOT-single exposure	:	May cause drowsiness or dizziness.

acetone (67-64-1)	
STOT-single exposure	May cause drowsiness or dizziness.

STOT-repeated exposure	:	Not classified
Aspiration hazard	:	Not classified

RAPTOR LINER - TINTABLE	
Viscosity, kinematic	8482.143 mm²/s

SECTION 12: Ecological information

According to the National Code of Practice for the Preparation of Material Safety Data Sheets, Environmental classification information is not mandatory. Information relevant for GHS classification is available on request

12.1. Ecotoxicity

Ecology - general	:	The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short–term (acute) : Not classified
Hazardous to the aquatic environment, long–term (chronic) : Not classified

acetone (67-64-1)	
LC50 - Fish [1]	6210 – 8120 mg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Measured concentration)
LOEC (chronic)	> 79 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	≥ 79 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
BCF - Fish [1]	0.69 (Pisces, Literature study)
Partition coefficient n-octanol/water (Log Pow)	-0.23 (Test data)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.374 – 0.988 (log Koc, SRC PCKOCWIN v2.0, Calculated value)

12.2. Persistence and degradability

acetone (67-64-1)	
Persistence and degradability	Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.43 g O_2/g substance
Chemical oxygen demand (COD)	1.92 g O_2/g substance
ThOD	2.2 g O_2/g substance

12.3. Bioaccumulative potential

acetone (67-64-1)	
BCF - Fish [1]	0.69 (Pisces, Literature study)
Partition coefficient n-octanol/water (Log Pow)	-0.23 (Test data)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.374 – 0.988 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

acetone (67-64-1)	
Surface tension	23.3 mN/m (20 °C)
Partition coefficient n-octanol/water (Log Pow)	-0.23 (Test data)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	See section 12.1 on ecotoxicology0.374 – 0.988 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

Ozone : Not classified
Other adverse effects : No additional information available

RAPTOR LINER - TINTABLE	
Fluorinated greenhouse gases	False

acetone (67-64-1)	
Fluorinated greenhouse gases	False

SECTION 13: Disposal considerations

Regional legislation (waste) : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information : Flammable vapours may accumulate in the container.

SECTION 14: Transport information

14.1. UN number

UN-No. (ADG) : 1263
UN-No. (IMDG) : 1263
UN-No. (IATA) : 1263

14.2. UN Proper Shipping Name

Proper Shipping Name (ADG) : PAINT
Proper Shipping Name (IMDG) : PAINT
Proper Shipping Name (IATA) : Paint

14.3. Transport hazard class(es)

ADG
Transport hazard class(es) (ADG) : 3
Danger labels (ADG) : 3
:

IMDG
Transport hazard class(es) (IMDG) : 3
Danger labels (IMDG) : 3
:

IATA
Transport hazard class(es) (IATA) : 3
Danger labels (IATA) : 3
:

14.4. Packing group

Packing group (ADG) : II - Substances presenting medium danger
Packing group (IMDG) : II
Packing group (IATA) : II

14.5. Environmental hazards

Marine pollutant : No
Dangerous for the environment : No
Other information : No supplementary information available

14.6. Special precautions for user

Specific storage requirement : No data available
Shock sensitivity : No data available

14.7. Additional information

Other information : No supplementary information available

Transport by road and rail

UN-No. (ADG) : 1263
Special provision (ADG) : 163, 367
Limited quantities (ADG) : 5l
Packing instructions (ADG) : P001, IBC02
Special packing provisions (ADG) : PP1
Portable tank and bulk container instructions (ADG) : T4
Portable tank and bulk container special provisions (ADG) : TP1, TP8, TP28

Transport by sea

UN-No. (IMDG) : 1263
Special provisions (IMDG) : 163, 367
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
Special packing provisions (IMDG) : PP1
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP1, TP8, TP28
EmS-No. (Fire) : F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage) : S-E - SPILLAGE SCHEDULE Echo - FLAMMABLE LIQUIDS, FLOATING ON WATER
Stowage category (IMDG) : B
Properties and observations (IMDG) : Miscibility with water depends upon the composition.

Air transport

UN-No. (IATA) : 1263
PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y341
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 353
PCA max net quantity (IATA) : 5L
CAO packing instructions (IATA) : 364
CAO max net quantity (IATA) : 60L
Special provisions (IATA) : A3, A72, A192
ERG code (IATA) : 3L

14.8. Hazchem or Emergency Action Code

Hazchem Code : * 3YE

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations specific for the product in question

No additional information available

Hazardous Substances and New Organisms Act

HSNO Approval Number : HSR002662
Group standard : Surface coatings and colourants

acetone (67-64-1)	
Hazardous Substances and New Organisms Act	
HSNO Approval Number	HSR001070

n-butyl acetate (123-86-4)	
Hazardous Substances and New Organisms Act	
HSNO Approval Number	HSR001091

lithium chloride (7447-41-8)	
Hazardous Substances and New Organisms Act	
HSNO Approval Number	HSR003547

cristobalite, 1%≤conc respirable crystalline silica<10% (14464-46-1)	
Hazardous Substances and New Organisms Act	
HSNO Approval Number	HSR003244

dibutyltin dilaurate (77-58-7)	
Hazardous Substances and New Organisms Act	
HSNO Approval Number	HSR003610

2-methoxy-1-methylethyl acetate (108-65-6)	
Hazardous Substances and New Organisms Act	
HSNO Approval Number	HSR001219

solvent naphtha (petroleum), light aromatic (64742-95-6)	
Hazardous Substances and New Organisms Act	
HSNO Approval Number	HSR001503

15.2. International agreements

No additional information available

SECTION 16: Other information

Revision date : 13/07/2021

Classification	
Flam. Liq. 2	H225
Skin Irrit. 3	H316
Eye Irrit. 2A	H319
Skin Sens. 1	H317
STOT SE 3	H336

Full text of H-statements	
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Flam. Liq. 2	Flammable liquids, Category 2
Skin Irrit. 3	Skin corrosion/irritation, Category 3
Skin Sens. 1	Skin sensitisation, Category 1
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

Full text of H-statements	
H225	Highly flammable liquid and vapour
H316	Causes mild skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness

For professional use only.

The information contained within this Safety Data Sheet (SDS) is believed to be correct as of the date issued however it is subject to change from time to time. It does not purport to be all inclusive or exhaustive and shall only be used as a guide. U-POL makes no warranties, expressed or implied, including but not limited to, any implied warranty of fitness for a given purpose or usage. It is the Buyers responsibility to ensure the suitability of the products for their own use and to check the information is up to date. U-POL cannot be held responsible for the suitability of use for any of its products, considering the wide range of factors such as application, substrates and handling methods. Since these conditions of use are outside of our control, the company shall not be held liable for any damage resulting from handling or from contact with the product detailed. Moreover, addition of reducers, hardeners or other additives over and above U-POL's recommendations for use, may substantially alter the composition and hazards of the product. U-POL data sheets are available via the U-POL website at WWW.U-POL.COM.

SECTION 1: Product identifier

1.1. GHS Product identifier

Product form : Mixture
Trade name : RAPTOR HARDENER

1.2. Other means of identification

Other means of identification : Component of: RLT/R1LK, RLT/R4LK, RLT/1RKIT, RLT/4RKIT, RLB/1RKIT, RLB/4RKIT

1.3. Recommended use of the chemical and restrictions on use

Recommended use : Coating

1.4. Details of manufacturer or importer

Supplier
U-POL Australia Pty Limited Ltd
55 Leland Street
Penrith NSW 2750
Australia
T 02 4731 2655 - F 02 4731 2611
info@u-pol.com.au - www.u-pol.com

Supplier
U-POL New Zealand Limited Ltd
c/o Lindsay & Associates Unit H, 12 Amera Place, East Tamaki
Manukau City Auckland 2013
New Zealand
T + 612 4731 2655 / 027 630 3691 - F + 612 4731 2611
info@u-pol.co.nz - www.u-pol.com

1.5. Emergency phone number

Emergency number : Australia (CHEMTREC): + (61) - 290372994 ; New Zealand (National Poisons Centre): 0800 764 766

SECTION 2: Hazard identification

2.1. Classification of the hazardous chemical

Classification according to the model Work Health and Safety Regulations (WHS Regulations)

Flammable liquids, Category 3	H226
Acute toxicity (inhalation:vapour) Category 4	H332
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2A	H319
Skin sensitisation, Category 1	H317
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335
Specific target organ toxicity – Repeated exposure, Category 2	H373
Aspiration hazard, Category 1	H304

2.2. GHS Label elements, including precautionary statements

Hazard pictograms (GHS AU) :

Flame | Exclamation mark | Health hazard

Signal word (GHS AU) : Danger
Contains : Xylene (30 – 60 %); hexamethylene diisocyanate oligomers (< 60 %); ethylbenzene (10 – 30 %); solvent naphtha (petroleum), light aromatic (< 10 %)
Hazard statements (GHS AU) : H226 - Flammable liquid and vapour
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation
H332 - Harmful if inhaled
H335 - May cause respiratory irritation
H373 - May cause damage to organs (hearing organs) through prolonged or repeated exposure (inhalation)

Precautionary statements (GHS AU) : P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read carefully and follow all instructions.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. heat, hot surfaces, open flames, sparks
P260 - Do not breathe vapours, spray, fume.
P264 - Wash hands thoroughly after handling.
P280 - Wear face protection, protective gloves, protective clothing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

SECTION 3: Composition and information on ingredients

Name	CAS-No.	%	Classification according to the model Work Health and Safety Regulations (WHS Regulations)
Xylene	1330-20-7	30 – 60	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304
hexamethylene diisocyanate oligomers	28182-81-2	< 60	Acute Tox. 4 (Inhalation), H332 Skin Sens. 1, H317 STOT SE 3, H335
ethylbenzene	100-41-4	10 – 30	Flam. Liq. 2, H225 Acute Tox. 5 (Oral), H303 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:vapour), H332 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 3, H412
Other substances (not contributing to the classification of this product)	-	≥ 62.65	-

SECTION 4: First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.

First-aid measures after skin contact : Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Symptoms caused by exposure

Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.

4.3. Medical attention and special treatment

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

Fire hazard : Flammable liquid and vapour.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Hazchem Code : * 3Y

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Safety glasses. Protective clothing. Gloves.
Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Do not breathe vapours, fume, spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and materials for containment and cleaning up

For containment : Contain released product, collect/pump into suitable containers. Collect spillage.
Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Do not breathe vapours, fume, spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.
Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Ground/bond container and receiving equipment.
Storage conditions	:	Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
Storage temperature	:	< 25 °C
Storage area	:	Store in a well-ventilated place.
Special rules on packaging	:	Keep only in original container.

SECTION 8: Exposure controls and personal protection

8.1. Control parameters - exposure standards

Xylene (1330-20-7)	
New Zealand - Occupational Exposure Limits	
Local name	Xylene (Dimethylbenzene)
WES-TWA (OEL TWA) [1]	217 mg/m³
WES-TWA (OEL TWA) [2]	50 ppm
Regulatory reference	Workplace Exposure Standards and Biological Exposure Indices, 12th Edition
New Zealand - Biological Exposure Indices	
Local name	Xylene
BEI	1.5 g/l Parameter: Methylhippuric acid - Medium: Urine - Sampling time: End of shift
Regulatory reference	Workplace Exposure Standards and Biological Exposure Indices, 12th Edition

ethylbenzene (100-41-4)	
Australia - Occupational Exposure Limits	
Local name	Ethyl benzene
OES TWA [1]	434 mg/m³
OES TWA [2]	100 ppm
OES STEL	543 mg/m³
OES STEL [ppm]	125 ppm
Regulatory reference	Workplace exposure standards for airborne contaminants (2019)
New Zealand - Occupational Exposure Limits	
Local name	Ethyl benzene
WES-TWA (OEL TWA) [1]	434 mg/m³
WES-TWA (OEL TWA) [2]	100 ppm
WES-STEL (OEL STEL)	543 mg/m³
WES-STEL (OEL STEL) [ppm]	125 ppm
Regulatory reference	Workplace Exposure Standards and Biological Exposure Indices, 12th Edition
New Zealand - Biological Exposure Indices	
Local name	Ethyl benzene
BEI	0.25 g/g creatinine Parameter: Sum of mandelic acid and phenylglyoxylic acids - Medium: Urine - Sampling time: End of shift or end of exposure
Regulatory reference	Workplace Exposure Standards and Biological Exposure Indices, 12th Edition

8.2. Biological Monitoring

No additional information available

8.3. Engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

8.4. Individual protection measures, such as personal protective equipment (PPE)

Personal protective equipment : Gas mask. Gloves. Protective clothing. Safety glasses.
Materials for protective clothing : Impermeable clothing
Hand protection : Protective gloves
Eye protection : Safety glasses
Skin and body protection : Wear suitable protective clothing
Respiratory protection : Air-fed respiratory protective equipment should be worn when this product is sprayed. [In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s)

Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

Physical state : Liquid
Appearance : Liquid.
Colour : Colourless
Odour : aromatic
Odour threshold : No data available
pH : No data available
Relative evaporation rate (butylacetate=1) : No data available
Melting point / Freezing point : No data available
Boiling point : No data available
Flash point : 27 °C
Auto-ignition temperature : No data available
Flammability : No data available
Vapour pressure : No data available
Relative density : No data available
Density : Density: 0.97 (0.96 – 0.98) g/cm³
Solubility : insoluble in water. soluble in most organic solvents.
Partition coefficient n-octanol/water (Log Pow) : No data available
Viscosity, kinematic : < 20.5 mm²/s
Explosive properties : No data available
Explosive limits : No data available
Minimum ignition energy : No data available
VOC content : 603 g/l
VOC content - Regulatory : No data available
Percent Solids : 0 wt%

SECTION 10: Stability and reactivity

Reactivity : Flammable liquid and vapour.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : No dangerous reactions known under normal conditions of use.
Conditions to avoid : Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.
Incompatible materials : No additional information available
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Harmful if inhaled.

ATE AU (vapours)	12.187 mg/l/4h

hexamethylene diisocyanate oligomers (28182-81-2)	
LD50 oral rat	> 2500 mg/kg (OECD Test Guideline 423, rat, female)
LD50 dermal rat	> 2000 mg/kg (OECD Test Guideline 402, rat, male/female)
LC50 Inhalation - Rat (Dust/Mist)	0.39 mg/l/4h (OECD Test Guideline 403, rat, female, inhalation, dust/mist)
ATE AU (gases)	4500 ppmv/4h
ATE AU (vapours)	11 mg/l/4h
ATE AU (dust,mist)	0.39 mg/l/4h

Xylene (1330-20-7)	
LD50 oral rat	> 4000 mg/kg bodyweight (Equivalent or similar to EU Method B.1, Rat, Female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	12126 mg/kg (Non-GLP, read-across from supporting substance, single dermal dose under occlusion followed by observation for 14 days)
LD50 dermal rabbit	12126 mg/kg bodyweight Animal: rabbit, Animal sex: male
LC50 Inhalation - Rat	29.09 mg/l (Equivalent or similar to EU Method B.2, 4 h, Rat, Male, Experimental value, Inhalation (vapours), 14 day(s))
LC50 Inhalation - Rat [ppm]	6700 ppm/4h (EU Method B.2 (Acute Toxicity (Inhalation)), 4h, rat, male)
ATE AU (dermal)	1100 mg/kg bodyweight
ATE AU (gases)	6700 ppmv/4h
ATE AU (vapours)	11 mg/l/4h
ATE AU (dust,mist)	1.5 mg/l/4h

ethylbenzene (100-41-4)	
LD50 oral rat	3500 mg/kg (Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	15433 mg/kg bodyweight (24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	17.8 mg/l (4 h, Rat, Male, Experimental value, Inhalation (vapours), 14 day(s))
ATE AU (oral)	3500 mg/kg bodyweight
ATE AU (dermal)	15433 mg/kg bodyweight
ATE AU (gases)	4500 ppmv/4h
ATE AU (vapours)	17.8 mg/l/4h
ATE AU (dust,mist)	1.5 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : May cause respiratory irritation.

hexamethylene diisocyanate oligomers (28182-81-2)	
STOT-single exposure	May cause respiratory irritation.

Xylene (1330-20-7)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : May cause damage to organs (hearing organs) through prolonged or repeated exposure (inhalation).

Xylene (1330-20-7)	
LOAEL (oral, rat, 90 days)	150 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents), Guideline: EPA OPP 82-1 (90-Day Oral Toxicity)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

ethylbenzene (100-41-4)	
NOAEL (oral, rat, 90 days)	75 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : May be fatal if swallowed and enters airways.

RAPTOR HARDENER	
Viscosity, kinematic	< 20.5 mm²/s

SECTION 12: Ecological information

According to the National Code of Practice for the Preparation of Material Safety Data Sheets, Environmental classification information is not mandatory. Information relevant for GHS classification is available on request

12.1. Ecotoxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Not classified

Xylene (1330-20-7)	
LC50 - Fish [1]	2.6 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	> 3.4 mg/l Test organisms (species): Ceriodaphnia dubia
ErC50 algae	4.36 mg/l (OECD 201: Alga, Growth Inhibition Test, 73 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)
NOEC chronic fish	> 1.3 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) Duration: '56 d'
BCF - Fish [1]	7.2 – 25.9 (56 day(s), Oncorhynchus mykiss, Flow-through system, Fresh water, Read-across)
Partition coefficient n-octanol/water (Log Pow)	3.2 (Read-across, 20 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.73 (log Koc, Equivalent or similar to OECD 121, Read-across)

ethylbenzene (100-41-4)	
LC50 - Fish [1]	5.1 mg/l Test organisms (species): Menidia menidia
EC50 - Crustacea [1]	1.8 – 2.4 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
LOEC (chronic)	1.7 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'
NOEC (chronic)	0.96 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'

ethylbenzene (100-41-4)	
BCF - Fish [1]	1 (6 week(s), Oncorhynchus kisutch, Flow-through system, Salt water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	3.6 (Experimental value, EU Method A.8: Partition Coefficient, 20 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.71 (log Koc, PCKOCWIN v1.66, QSAR)

12.2. Persistence and degradability

Xylene (1330-20-7)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.

ethylbenzene (100-41-4)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.44 g O_2/g substance
Chemical oxygen demand (COD)	2.1 g O_2/g substance
ThOD	3.17 g O_2/g substance

12.3. Bioaccumulative potential

Xylene (1330-20-7)	
BCF - Fish [1]	7.2 – 25.9 (56 day(s), Oncorhynchus mykiss, Flow-through system, Fresh water, Read-across)
Partition coefficient n-octanol/water (Log Pow)	3.2 (Read-across, 20 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.73 (log Koc, Equivalent or similar to OECD 121, Read-across)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

ethylbenzene (100-41-4)	
BCF - Fish [1]	1 (6 week(s), Oncorhynchus kisutch, Flow-through system, Salt water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	3.6 (Experimental value, EU Method A.8: Partition Coefficient, 20 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.71 (log Koc, PCKOCWIN v1.66, QSAR)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

Xylene (1330-20-7)	
Surface tension	28.01 – 29.76 mN/m (25 °C)
Partition coefficient n-octanol/water (Log Pow)	3.2 (Read-across, 20 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	See section 12.1 on ecotoxicology2.73 (log Koc, Equivalent or similar to OECD 121, Read-across)
Ecology - soil	Low potential for adsorption in soil. May be harmful to plant growth, blooming and fruit formation.

ethylbenzene (100-41-4)	
Surface tension	71.2 mN/m (23 °C, 0.058 g/l, EU Method A.5: Surface tension)
Partition coefficient n-octanol/water (Log Pow)	3.6 (Experimental value, EU Method A.8: Partition Coefficient, 20 °C)

ethylbenzene (100-41-4)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	See section 12.1 on ecotoxicology2.71 (log Koc, PCKOCWIN v1.66, QSAR)
Ecology - soil	Low potential for adsorption in soil. Toxic to soil organisms.

12.5. Other adverse effects

Ozone : Not classified

Other adverse effects : No additional information available

RAPTOR HARDENER	
Fluorinated greenhouse gases	False

hexamethylene diisocyanate oligomers (28182-81-2)	
Fluorinated greenhouse gases	False

Xylene (1330-20-7)	
Fluorinated greenhouse gases	False

ethylbenzene (100-41-4)	
Fluorinated greenhouse gases	False

SECTION 13: Disposal considerations

Regional legislation (waste) : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Additional information : Flammable vapours may accumulate in the container.

SECTION 14: Transport information

14.1. UN number

UN-No. (ADG) : 1263

UN-No. (IMDG) : 1263

UN-No. (IATA) : 1263

14.2. UN Proper Shipping Name

Proper Shipping Name (ADG) : PAINT RELATED MATERIAL

Proper Shipping Name (IMDG) : PAINT RELATED MATERIAL

Proper Shipping Name (IATA) : Paint

14.3. Transport hazard class(es)

ADG

Transport hazard class(es) (ADG) : 3

Danger labels (ADG) : 3

:

IMDG

Transport hazard class(es) (IMDG) : 3

Danger labels (IMDG) : 3

:

IATA

Transport hazard class(es) (IATA) : 3

Danger labels (IATA) : 3

:

14.4. Packing group

Packing group (ADG) : III - Substances presenting low danger

Packing group (IMDG) : III

Packing group (IATA) : III

14.5. Environmental hazards

Marine pollutant : No

Dangerous for the environment : No

Other information : No supplementary information available

14.6. Special precautions for user

Specific storage requirement : No data available

Shock sensitivity : No data available

14.7. Additional information

Other information : No supplementary information available

Transport by road and rail

UN-No. (ADG) : 1263

Special provision (ADG) : 163, 223, 367

Limited quantities (ADG) : 5l

Packing instructions (ADG) : P001, IBC03, LP01

Special packing provisions (ADG) : PP1

Portable tank and bulk container instructions (ADG) : T2

Portable tank and bulk container special provisions (ADG) : TP1, TP29

Transport by sea

UN-No. (IMDG) : 1263

Special provisions (IMDG) : 163, 223, 367, 955

Limited quantities (IMDG) : 5 L

Excepted quantities (IMDG) : E1

Packing instructions (IMDG) : P001, LP01

Special packing provisions (IMDG) : PP1

IBC packing instructions (IMDG) : IBC03

Tank instructions (IMDG) : T2

Tank special provisions (IMDG) : TP1, TP29

EmS-No. (Fire) : F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS

EmS-No. (Spillage) : S-E - SPILLAGE SCHEDULE Echo - FLAMMABLE LIQUIDS, FLOATING ON WATER

Stowage category (IMDG) : A

Properties and observations (IMDG) : Miscibility with water depends upon the composition.

Air transport

UN-No. (IATA) : 1263

PCA Excepted quantities (IATA) : E1

PCA Limited quantities (IATA) : Y344

PCA limited quantity max net quantity (IATA) : 10L

PCA packing instructions (IATA) : 355

PCA max net quantity (IATA) : 60L

CAO packing instructions (IATA) : 366

CAO max net quantity (IATA) : 220L

Special provisions (IATA) : A3, A72, A192

ERG code (IATA) : 3L

14.8. Hazchem or Emergency Action Code

Hazchem Code : * 3Y

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations specific for the product in question

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

Covered by The Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) : This chemical is covered by the Standard for the Uniform Scheduling of Medicines and Poisons

Hazardous Substances and New Organisms Act

HSNO Approval Number : HSR002662

Group standard : Surface coatings and colourants

hexamethylene-di-isocyanate (822-06-0)	
Hazardous Substances and New Organisms Act	
HSNO Approval Number	HSR001536

n-butyl acetate (123-86-4)	
Hazardous Substances and New Organisms Act	
HSNO Approval Number	HSR001091

solvent naphtha (petroleum), light aromatic (64742-95-6)	
Hazardous Substances and New Organisms Act	
HSNO Approval Number	HSR001503

hexamethylene diisocyanate oligomers (28182-81-2)	
Hazardous Substances and New Organisms Act	
HSNO Approval Number	HSR003565

Xylene (1330-20-7)	
Hazardous Substances and New Organisms Act	
HSNO Approval Number	HSR000983

ethylbenzene (100-41-4)	
Hazardous Substances and New Organisms Act	
HSNO Approval Number	HSR001151

15.2. International agreements

No additional information available

SECTION 16: Other information

Revision date : 09/12/2021

Classification	
Flam. Liq. 3	H226
Acute Tox. 4 (Inhalation:vapour)	H332
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Skin Sens. 1	H317
STOT SE 3	H335
STOT RE 2	H373
Asp. Tox. 1	H304

Full text of H-statements	
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 4
Acute Tox. 5 (Oral)	Acute toxicity (oral), Category 5
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation
H225	Highly flammable liquid and vapour
H226	Flammable liquid and vapour
H303	May be harmful if swallowed
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H373	May cause damage to organs through prolonged or repeated exposure
H412	Harmful to aquatic life with long lasting effects

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