

RESENE QRISTAL CLEAR POLYURETHANE

Resene Paints Ltd

Version No: 1.1

Safety Data Sheet according to HSNO Regulations

Chemwatch Hazard Alert Code: 2

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L.GHS.NZL.EN

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

Product name	RESENE QRISTAL CLEAR POLYURETHANE
Synonyms	Incl Gloss, Satin, Flat
Proper shipping name	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)
Other means of identification	Not Available

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	7784, 8210, 9707
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Details of the supplier of the safety data sheet

Registered company name	Resene Paints Ltd
Address	32-50 Vogel Street Naenae 5011 Wellington New Zealand
Telephone	+64 4 577 0500
Fax	+64 4 577 3327
Website	www.resene.co.nz
Email	advice@resene.co.nz

Emergency telephone number

Association / Organisation	NZ POISONS (24hr 7 days)
Emergency telephone numbers	0800 764 766
Other emergency telephone numbers	Not Available

CHEMWATCH EMERGENCY RESPONSE

Primary Number	Alternative Number 1	Alternative Number 2
+800 2436 2255	+612 9186 1132	Not Available

Once connected and if the message is not in your preferred language then please dial 01

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation. Classified as Dangerous Goods for transport purposes.

Classification ^[1]	Skin Corrosion/Irritation Category 3, Eye Irritation Category 2A, Skin Sensitizer Category 1, Carcinogenicity Category 2, Reproductive Toxicity Category 2, Specific target organ toxicity - repeated exposure Category 2, Acute Aquatic Hazard Category 2, Chronic Aquatic Hazard Category 2, Flammable Liquid Category 3
Legend:	1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI
Determined by Chemwatch using GHS/HSNO criteria	9.1B, 6.5B (contact), 6.7B, 6.3B, 6.4A, 6.9B, 9.1D, 6.8B, 3.1C

Label elements

GHS label elements	
SIGNAL WORD	WARNING

Hazard statement(s)

Continued...

RESENE QRISTAL CLEAR POLYURETHANE

H316	Causes mild skin irritation
H319	Causes serious eye irritation
H317	May cause an allergic skin reaction
H351	Suspected of causing cancer
H361	Suspected of damaging fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
H401	Toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects
H226	Flammable liquid and vapour

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
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Precautionary statement(s) Response

P308+P313	IF exposed or concerned: Get medical advice/attention.
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Precautionary statement(s) Storage

P403+P235	Store in a well-ventilated place. Keep cool.
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Precautionary statement(s) Disposal

P501	Dispose of contents/container in accordance with local regulations.
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SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

The specific chemical identity and/ or exact percentage of composition has been withheld as a trade secret

Mixtures

CAS No	%[weight]	Name
96-29-7	0.1-0.5	<u>methyl ethyl ketoxime</u>
8052-41-3	20-40	<u>naphtha petroleum, heavy, hydrosulfurised</u>
64742-88-7	20-40	<u>solvent naphtha petroleum, medium aliphatic</u>
1330-20-7	1-10	<u>xylene</u>
95-63-6	10-20	<u>1,2,4-trimethyl benzene</u>
100-41-4	0.1-1	<u>ethylbenzene</u>
64742-94-5	1-10	<u>solvent naphtha petroleum, heavy aromatic</u>
64742-95-6	1-10	<u>naphtha petroleum, light aromatic solvent</u>

SECTION 4 FIRST AID MEASURES

NZ Poisons Centre 0800 POISON (0800 764 766) | NZ Emergency Services: 111

Description of first aid measures

Eye Contact	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Immediately hold eyelids apart and flush the eye continuously with running water. ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▶ Continue flushing for at least 15 minutes ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> ▶ Immediately remove all contaminated clothing, including footwear. ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation.
Inhalation	<ul style="list-style-type: none"> ▶ If fumes or combustion products are inhaled remove from contaminated area. ▶ Lay patient down. Keep warm and rested. ▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. ▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ▶ Transport to hospital, or doctor.
Ingestion	<ul style="list-style-type: none"> ▶ If swallowed do NOT induce vomiting. ▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▶ Observe the patient carefully. ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ▶ Seek medical advice. ▶ Avoid giving milk or oils. ▶ Avoid giving alcohol. ▶ If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

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SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

- ▶ Foam.

Special hazards arising from the substrate or mixture

Fire Incompatibility	▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
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Advice for firefighters

Fire Fighting	▶ Alert Fire Brigade and tell them location and nature of hazard.
Fire/Explosion Hazard	▶ Liquid and vapour are flammable. Combustion products include; carbon monoxide (CO) carbon dioxide (CO2) other pyrolysis products typical of burning organic material May emit clouds of acrid smoke

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Minor Spills	▶ Remove all ignition sources.
Major Spills	Chemical Class: aromatic hydrocarbons For release onto land: recommended sorbents listed in order of priority. ▶ Clear area of personnel and move upwind.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	<ul style="list-style-type: none"> ▶ Containers, even those that have been emptied, may contain explosive vapours. ▶ Electrostatic discharge may be generated during pumping - this may result in fire. ▶ Avoid all personal contact, including inhalation. ▶ DO NOT allow clothing wet with material to stay in contact with skin
Other information	▶ Store in original containers in approved flammable liquid storage area.

Conditions for safe storage, including any incompatibilities

Suitable container	▶ Packing as supplied by manufacturer.
Storage incompatibility	<p>Xylenes:</p> <ul style="list-style-type: none"> ▶ may ignite or explode in contact with strong oxidisers, 1,3-dichloro-5,5-dimethylhydantoin, uranium fluoride ▶ attack some plastics, rubber and coatings ▶ may generate electrostatic charges on flow or agitation due to low conductivity. ▶ Vigorous reactions, sometimes amounting to explosions, can result from the contact between aromatic rings and strong oxidising agents. <p>Low molecular weight alkanes:</p> <ul style="list-style-type: none"> ▶ May react violently with strong oxidisers, chlorine, chlorine dioxide, dioxygenyl tetrafluoroborate. <p>For alkyl aromatics:</p> <p>The alkyl side chain of aromatic rings can undergo oxidation by several mechanisms.</p>

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
New Zealand Workplace Exposure Standards (WES)	naphtha petroleum, heavy, hydrodesulfurised	White spirits (Stoddard solvent)	525 mg/m ³ / 100 ppm	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	xylene	Xylene (o-, m-, p-isomers)	217 mg/m ³ / 50 ppm	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	ethylbenzene	Ethyl benzene	434 mg/m ³ / 100 ppm	543 mg/m ³ / 125 ppm	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
methyl ethyl ketoxime	Butanone oxime; (Ethyl methyl ketoxime)	10 ppm	10 ppm	52 ppm
naphtha petroleum, heavy, hydrodesulfurised	Stoddard solvent; (Mineral spirits, 85% nonane and 15% trimethyl benzene)	100 ppm	350 ppm	29500 ppm
solvent naphtha petroleum, medium aliphatic	Solvent naphtha, petroleum, medium aliphatic; (Mineral spirits, naphtha)	0.32 mg/m ³	3.5 mg/m ³	21 mg/m ³
xylene	Xylenes	Not Available	Not Available	Not Available

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1,2,4-trimethyl benzene	Trimethylbenzene, 1,2,4-; (Pseudocumene)	Not Available	Not Available	360 ppm
ethylbenzene	Ethyl benzene	Not Available	Not Available	Not Available
naphtha petroleum, light aromatic solvent	Aromatic hydrocarbon solvents; (High flash naphtha distillates; Solvent naphtha (petroleum), light aromatic)	3.1 ppm	34 ppm	410 ppm

Ingredient	Original IDLH	Revised IDLH
methyl ethyl ketoxime	Not Available	Not Available
naphtha petroleum, heavy, hydrodesulfurised	29,500 mg/m3	20,000 mg/m3
solvent naphtha petroleum, medium aliphatic	Not Available	Not Available
xylene	1,000 ppm	900 ppm
1,2,4-trimethyl benzene	Not Available	Not Available
ethylbenzene	2,000 ppm	800 [LEL] ppm
solvent naphtha petroleum, heavy aromatic	Not Available	Not Available
naphtha petroleum, light aromatic solvent	Not Available	Not Available

MATERIAL DATA

For methyl ethyl ketoxime (MEKO)

CEL TWA: 10 ppm, 36 mg/m3 (compare WEEL-TWA)

(CEL = Chemwatch Exposure Limit)

OEL-TWA: 0.28 ppm, 1 mg/m3 ORICA Australia quoting DSM Chemicals

Saturated vapour concentration: 1395 ppm at 20 deg.

Odour threshold: 0.25 ppm.

For white spirit:

Low and high odour thresholds of 5.25 and 157.5 mg/m3, respectively, were considered to provide a rather useful index of odour as a warning property.

For trimethyl benzene as mixed isomers (of unstated proportions)

Odour Threshold Value: 2.4 ppm (detection)

Use care in interpreting effects as a single isomer or other isomer mix.

Exposed individuals are **NOT** reasonably expected to be warned, by smell, that the Exposure Standard is being exceeded.

for xylenes:

IDLH Level: 900 ppm

Odour Threshold Value: 20 ppm (detection), 40 ppm (recognition)

NOTE: Detector tubes for o-xylene, measuring in excess of 10 ppm, are available commercially.

for ethyl benzene:

Odour Threshold Value: 0.46-0.60 ppm

NOTE: Detector tubes for ethylbenzene, measuring in excess of 30 ppm, are commercially available.

For ethanol:

Odour Threshold Value: 49-716 ppm (detection), 101 ppm (recognition)

Eye and respiratory tract irritation do not appear to occur at exposure levels of less than 5000 ppm and the TLV-TWA is thought to provide an adequate margin of safety against such effects.

For cumene:


Odour Threshold Value: 0.008-0.132 ppm (detection), 0.047 ppm (recognition)

Exposure at or below the TLV-TWA is thought to prevent induction of narcosis.

NOTE P: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0.01% w/w benzene (EINECS No 200-753-7).

NOTE M: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0.005% w/w benzo[a]pyrene (EINECS No 200-028-5).

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard.
Personal protection	
Eye and face protection	► Safety glasses with side shields.
Skin protection	See Hand protection below
Hands/feet protection	► Wear chemical protective gloves, e.g. PVC. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer.
Body protection	See Other protection below
Other protection	► Overalls. Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.
Thermal hazards	Not Available

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

Forsberg Clothing Performance Index.

The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:

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Respiratory protection

Type A-P Filter of sufficient capacity.

Where the concentration of gas/particulates in the breathing zone approaches or exceeds the 'Exposure Standard' (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

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Material	CPI
BUTYL	C
BUTYL/NEOPRENE	C
HYPALON	C
NAT+NEOPR+NITRILE	C
NATURAL RUBBER	C
NATURAL+NEOPRENE	C
NEOPRENE	C
NEOPRENE/NATURAL	C
NITRILE	C
NITRILE+PVC	C
PE/EVAL/PE	C
PVA	C
PVC	C
PVDC/PE/PVDC	C
TEFLON	C
VITON	C

* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as 'feel' or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 5 x ES	A-AUS / Class 1 P2	-	A-PAPR-AUS / Class 1 P2
up to 25 x ES	Air-line*	A-2 P2	A-PAPR-2 P2
up to 50 x ES	-	A-3 P2	-
50+ x ES	-	Air-line**	-

* - Continuous-flow; ** - Continuous-flow or positive pressure demand

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO₂), G = Agricultural chemicals, K = Ammonia(NH₃), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Amber colour liquid with mild solvent odour		
Physical state	Liquid	Relative density (Water = 1)	0.90-0.94
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	291
pH (as supplied)	Not Available	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	450-500
Initial boiling point and boiling range (°C)	151	Molecular weight (g/mol)	Not Available
Flash point (°C)	35	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Flammable.	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	51-67
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Immiscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	540

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	► Unstable in the presence of incompatible materials.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

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Information on toxicological effects

Inhaled	Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. Inhalation of vapours may cause drowsiness and dizziness.
Ingestion	Accidental ingestion of the material may be seriously damaging to the health of the individual; animal experiments indicate that ingestion of less than 40 gram may be fatal. Swallowing of the liquid may cause aspiration of vomit into the lungs with the risk of haemorrhaging, pulmonary oedema, progressing to chemical pneumonitis; serious consequences may result.
Skin Contact	Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. Limited evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact.
Eye	Limited evidence exists, or practical experience suggests, that the material may cause eye irritation in a substantial number of individuals.
Chronic	On the basis, primarily, of animal experiments, concern has been expressed that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment.

RESENE QRISTAL CLEAR POLYURETHANE	TOXICITY	IRRITATION
	Not Available	Not Available
methyl ethyl ketoxime	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >184-<2 mg/kg ^[1]	Not Available
	Inhalation (rat) LC50: 20 mg/l/4h ** ^[2]	
	Oral (rat) LD50: >900 mg/kg ^[1]	
naphtha petroleum, heavy, hydrodesulfurised	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >1900 mg/kg ^[1]	Not Available
	Inhalation (rat) LC50: >1400 ppm/8H ^[2]	
	Oral (rat) LD50: >4500 mg/kg ^[1]	
solvent naphtha petroleum, medium aliphatic	TOXICITY	IRRITATION
	dermal (rat) LD50: 28000 mg/kg ⁿ ^[2]	* Xergon
	Oral (rat) LD50: >19650 mg/kg ^[2]	Nil reported
xylene	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >1700 mg/kg ^[2]	Eye (human): 200 ppm irritant
	Inhalation (rat) LC50: 5000 ppm/4h ^[2]	Eye (rabbit): 5 mg/24h SEVERE
	Oral (rat) LD50: 4300 mg/kg ^[2]	Eye (rabbit): 87 mg mild
		Skin (rabbit): 500 mg/24h moderate
1,2,4-trimethyl benzene	TOXICITY	IRRITATION
	dermal (rat) LD50: 3504 mg/kg ^[1]	Not Available
	Inhalation (rat) LC50: 18 mg/L/4hd ^[2]	
	Oral (rat) LD50: ca.3504 mg/kg ^[1]	
ethylbenzene	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: ca.15432.6 mg/kg ^[1]	Eye (rabbit): 500 mg - SEVERE
	Inhalation (mouse) LC50: 35.5 mg/L/2H ^[2]	Skin (rabbit): 15 mg/24h mild
	Inhalation (rat) LC50: 55 mg/L/2H ^[2]	
	Oral (rat) LD50: 3500 mg/kg ^[2]	
solvent naphtha petroleum, heavy aromatic	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg ^[1]	[PETROFIN]
	Inhalation (rat) LC50: >0.59 mg/L/4H ^[2]	Eye (rabbit): Irritating
	Oral (rat) LD50: >2000 mg/kg ^[1]	

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naphtha petroleum, light aromatic solvent	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >1900 mg/kg ^[1]	Nil reported
	Inhalation (rat) LC50: >3670 ppm/8 h ^[2]	
	Oral (rat) LD50: >4500 mg/kg ^[1]	

Legend:

1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. * Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

METHYL ETHYL KETOXIME	<p>The following information refers to contact allergens as a group and may not be specific to this product.</p> <p>For methyl ethyl ketoxime (MEKO)</p> <p>Carcinogenicity: Increased incidences of liver tumours were observed in rat and mouse lifetime studies and there was also an increased incidence of mammary gland tumours in female rats, however, this was only seen at mid- and/or high concentrations of MEKO.</p> <p>Mammalian lymphocyte mutagen *Huls Canada ** Merck</p>
NAPHTHA PETROLEUM, HEAVY, HYDRODESULFURISED	<p>No significant acute toxicological data identified in literature search.</p> <p>Studies indicate that normal, branched and cyclic paraffins are absorbed from the mammalian gastrointestinal tract and that the absorption of n-paraffins is inversely proportional to the carbon chain length, with little absorption above C30.</p> <p>For trimethylbenzenes:</p> <p>Absorption of 1,2,4-trimethylbenzene occurs after oral, inhalation, or dermal exposure.</p> <p>For C9 aromatics (typically trimethylbenzenes - TMBs)</p> <p>Acute Toxicity</p> <p>Acute toxicity studies (oral, dermal and inhalation routes of exposure) have been conducted in rats using various solvent products containing predominantly mixed C9 aromatic hydrocarbons (CAS RN 64742-95-6).</p> <p>for petroleum:</p> <p>This product contains benzene which is known to cause acute myeloid leukaemia and n-hexane which has been shown to metabolize to compounds which are neuropathic.</p>
SOLVENT NAPHTHA PETROLEUM, MEDIUM ALIPHATIC	<p>Studies indicate that normal, branched and cyclic paraffins are absorbed from the mammalian gastrointestinal tract and that the absorption of n-paraffins is inversely proportional to the carbon chain length, with little absorption above C30.</p> <p>for petroleum:</p> <p>This product contains benzene which is known to cause acute myeloid leukaemia and n-hexane which has been shown to metabolize to compounds which are neuropathic.</p> <p>The substance is classified by IARC as Group 3:</p> <p>NOT classifiable as to its carcinogenicity to humans.</p> <p>for full range naphthas</p>
XYLENE	<p>The material may produce severe irritation to the eye causing pronounced inflammation.</p> <p>The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic).</p> <p>The substance is classified by IARC as Group 3:</p> <p>NOT classifiable as to its carcinogenicity to humans.</p> <p>Reproductive effector in rats</p>
1,2,4-TRIMETHYL BENZENE	<p>Asthma-like symptoms may continue for months or even years after exposure to the material ceases.</p> <p>For trimethylbenzenes:</p> <p>Absorption of 1,2,4-trimethylbenzene occurs after oral, inhalation, or dermal exposure.</p> <p>Other Toxicity data is available for CHEMWATCH 12172 1,2,3-trimethylbenzene CHEMWATCH 2325 1,3,5-trimethylbenzene</p>
ETHYLBENZENE	<p>The material may produce severe irritation to the eye causing pronounced inflammation.</p> <p>The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic).</p> <p>Ethylbenzene is readily absorbed following inhalation, oral, and dermal exposures, distributed throughout the body, and excreted primarily through urine.</p> <p>NOTE: Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA.</p> <p>WARNING: This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.</p> <p>Liver changes, uterine tract, effects on fertility, foetotoxicity, specific developmental abnormalities (musculoskeletal system) recorded.</p>
SOLVENT NAPHTHA PETROLEUM, HEAVY AROMATIC	<p>for petroleum:</p> <p>This product contains benzene which is known to cause acute myeloid leukaemia and n-hexane which has been shown to metabolize to compounds which are neuropathic.</p>
NAPHTHA PETROLEUM, LIGHT AROMATIC SOLVENT	<p>Asthma-like symptoms may continue for months or even years after exposure to the material ceases.</p> <p>For trimethylbenzenes:</p> <p>Absorption of 1,2,4-trimethylbenzene occurs after oral, inhalation, or dermal exposure.</p> <p>For C9 aromatics (typically trimethylbenzenes - TMBs)</p> <p>Acute Toxicity</p> <p>Acute toxicity studies (oral, dermal and inhalation routes of exposure) have been conducted in rats using various solvent products containing predominantly mixed C9 aromatic hydrocarbons (CAS RN 64742-95-6).</p> <p>* [Devoe] .</p>

Acute Toxicity	☐	Carcinogenicity	✓
Skin Irritation/Corrosion	✓	Reproductivity	✓
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	☐
Respiratory or Skin sensitisation	✓	STOT - Repeated Exposure	✓
Mutagenicity	☐	Aspiration Hazard	☐

Legend: ✗ – Data available but does not fill the criteria for classification
 ✓ – Data required to make classification available
 ☐ – Data Not Available to make classification

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SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
methyl ethyl ketoxime	EC50	96	Algae or other aquatic plants	4.557mg/L	3
methyl ethyl ketoxime	LC50	96	Fish	37.890mg/L	3
methyl ethyl ketoxime	EC50	48	Crustacea	ca.201mg/L	2
methyl ethyl ketoxime	EC50	72	Algae or other aquatic plants	ca.6.09mg/L	2
methyl ethyl ketoxime	NOEC	72	Algae or other aquatic plants	ca.1.02mg/L	2
naphtha petroleum, heavy, hydrodesulfurised	EC50	96	Algae or other aquatic plants	64mg/L	2
solvent naphtha petroleum, medium aliphatic	EC50	48	Crustacea	>100mg/L	1
solvent naphtha petroleum, medium aliphatic	EC50	96	Algae or other aquatic plants	=450mg/L	1
xylene	EC50	24	Crustacea	0.711mg/L	4
xylene	LC50	96	Fish	0.0013404mg/L	4
xylene	EC50	48	Crustacea	>3.4mg/L	2
xylene	EC50	72	Algae or other aquatic plants	4.6mg/L	2
xylene	NOEC	73	Algae or other aquatic plants	0.44mg/L	2
1,2,4-trimethyl benzene	EC50	384	Crustacea	0.328mg/L	3
1,2,4-trimethyl benzene	EC50	96	Algae or other aquatic plants	2.154mg/L	3
1,2,4-trimethyl benzene	LC50	96	Fish	1.318mg/L	3
1,2,4-trimethyl benzene	EC50	48	Crustacea	0.0036057mg/L	4
ethylbenzene	EC50	3	Algae or other aquatic plants	0.0509616mg/L	4
ethylbenzene	EC50	48	Crustacea	0.0021234mg/L	4
ethylbenzene	EC50	96	Algae or other aquatic plants	3.6mg/L	4
ethylbenzene	LC50	96	Fish	0.0043mg/L	4
ethylbenzene	NOEC	168	Crustacea	0.96mg/L	2
solvent naphtha petroleum, heavy aromatic	EC50	48	Crustacea	=0.95mg/L	1
solvent naphtha petroleum, heavy aromatic	EC50	72	Algae or other aquatic plants	<1mg/L	1
solvent naphtha petroleum, heavy aromatic	LC50	96	Fish	0.58mg/L	2
solvent naphtha petroleum, heavy aromatic	EC50	48	Crustacea	0.76mg/L	2
solvent naphtha petroleum, heavy aromatic	NOEC	96	Algae or other aquatic plants	0.12mg/L	2
naphtha petroleum, light aromatic solvent	EC50	48	Crustacea	=6.14mg/L	1
naphtha petroleum, light aromatic solvent	EC10	72	Algae or other aquatic plants	1.13mg/L	1
naphtha petroleum, light aromatic solvent	EC50	72	Algae or other aquatic plants	3.29mg/L	1
naphtha petroleum, light aromatic solvent	NOEC	72	Algae or other aquatic plants	=1mg/L	1

Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark.

When spilled this product may act as a typical oil, causing a film, sheen, emulsion or sludge at or beneath the surface of the body of water.

For 1,2,4-trimethylbenzene:

Half-life (hr) air : 0.48-16

Half-life (hr) H₂O surface water : 0.24-672

Half-life (hr) H₂O ground : 336-1344

Half-life (hr) soil : 168-672

Henry's Pa m³/mol: 385-627

Bioaccumulation : not significant

1,2,4-Trimethylbenzene is a volatile organic compound (VOC) substance.

Within an aromatic series, acute toxicity increases with increasing alkyl substitution on the aromatic nucleus.

For C₉aromatics (typically trimethylbenzene - TMBs)

Chemicals in this category possess properties indicating a hazard for the environment (acute toxicity for fish, invertebrates, and algae from 1 to 10 mg/L).

For xylenes :

log K_{oc} : 2.05-3.08

K_{oc} : 25.4-204

Half-life (hr) air : 0.24-42

Half-life (hr) H₂O surface water : 24-672

Continued...

RESENE QRISTAL CLEAR POLYURETHANE

Half-life (hr) H₂O ground : 336-8640

Half-life (hr) soil : 52-672

Henry's Pa m³/mol: 637-879Henry's atm m³/mol: 7.68E-03

BOD 5 if unstated: 1.4,1%

COD : 2.56,13%

ThOD : 3.125

BCF : 23

log BCF : 1.17-2.41

Environmental Fate**Terrestrial fate:** Measured Koc values of 166 and 182, indicate that 3-xylene is expected to have moderate mobility in soil.**DO NOT** discharge into sewer or waterways.**Persistence and degradability**

Ingredient	Persistence: Water/Soil	Persistence: Air
methyl ethyl ketoxime	LOW	LOW
xylene	HIGH (Half-life = 360 days)	LOW (Half-life = 1.83 days)
1,2,4-trimethyl benzene	LOW (Half-life = 56 days)	LOW (Half-life = 0.67 days)
ethylbenzene	HIGH (Half-life = 228 days)	LOW (Half-life = 3.57 days)

Bioaccumulative potential

Ingredient	Bioaccumulation
methyl ethyl ketoxime	LOW (BCF = 5.8)
xylene	MEDIUM (BCF = 740)
1,2,4-trimethyl benzene	LOW (BCF = 275)
ethylbenzene	LOW (BCF = 79.43)
solvent naphtha petroleum, heavy aromatic	LOW (BCF = 159)

Mobility in soil



Ingredient	Mobility
methyl ethyl ketoxime	LOW (KOC = 130.8)
1,2,4-trimethyl benzene	LOW (KOC = 717.6)
ethylbenzene	LOW (KOC = 517.8)

SECTION 13 DISPOSAL CONSIDERATIONS**Waste treatment methods**

Product / Packaging disposal	<ul style="list-style-type: none"> Containers may still present a chemical hazard/ danger when empty. Legislation addressing waste disposal requirements may differ by country, state and/ or territory. DO NOT allow wash water from cleaning or process equipment to enter drains. Recycle wherever possible.
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Ensure that the disposal of material is carried out in accordance with Hazardous Substances (Disposal) Regulations 2001.

SECTION 14 TRANSPORT INFORMATION**Labels Required**

	
Marine Pollutant	
HAZCHEM	•3Y

Land transport (UN)

UN number	1263
Packing group	III
UN proper shipping name	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)
Environmental hazard	Not Applicable

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Transport hazard class(es)	Class	3
	Subrisk	Not Applicable
Special precautions for user	Special provisions	163; 223; 367
	Limited quantity	5 L

Air transport (ICAO-IATA / DGR)

UN number	1263		
Packing group	III		
UN proper shipping name	Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base); Paint related material (including paint thinning or reducing compounds)		
Environmental hazard	Not Applicable		
Transport hazard class(es)			
	ICAO/IATA Class	3	
	ICAO / IATA Subrisk	Not Applicable	
	ERG Code	3L	
Special precautions for user	Special provisions		A3 A72 A192
	Cargo Only Packing Instructions		366
	Cargo Only Maximum Qty / Pack		220 L
	Passenger and Cargo Packing Instructions		355
	Passenger and Cargo Maximum Qty / Pack		60 L
	Passenger and Cargo Limited Quantity Packing Instructions		Y344
	Passenger and Cargo Limited Maximum Qty / Pack		10 L

Sea transport (IMDG-Code / GGVSee)

UN number	1263		
Packing group	III		
UN proper shipping name	PAINT (including paint, lacquer, enamel, stain, shellac solutions, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)		
Environmental hazard	Marine Pollutant		
Transport hazard class(es)	IMDG Class	3	
	IMDG Subrisk	Not Applicable	
Special precautions for user	EMS Number	F-E, S-E	
	Special provisions	163 223 367 955	
	Limited Quantities	5 L	

Transport in bulk according to Annex II of MARPOL and the IBC code

Source	Ingredient	Pollution Category
IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk	methyl ethyl ketoxime	Y
IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk	naphtha petroleum, heavy, hydrodesulfurised	Y
IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk	xylene	Y
IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk	1,2,4-trimethyl benzene	Y; X
IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk	ethylbenzene	Y
IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk	naphtha petroleum, light aromatic solvent	Y

SECTION 15 REGULATORY INFORMATION

RESENE QRISTAL CLEAR POLYURETHANE

Safety, health and environmental regulations / legislation specific for the substance or mixture

This substance is to be managed using the conditions specified in an applicable Group Standard

HSR Number	Group Standard
HSR002669	Surface Coatings and Colourants (Flammable, Toxic [6.7]) Group Standard 2006

METHYL ETHYL KETOXIME(96-29-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals	New Zealand Inventory of Chemicals (NZIoC)
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NAPHTHA PETROLEUM, HEAVY, HYDRODESULFURISED(8052-41-3.) IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs	New Zealand Inventory of Chemicals (NZIoC)
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals	New Zealand Workplace Exposure Standards (WES)

SOLVENT NAPHTHA PETROLEUM, MEDIUM ALIPHATIC(64742-88-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

New Zealand Inventory of Chemicals (NZIoC)
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XYLENE(1330-20-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs	New Zealand Inventory of Chemicals (NZIoC)
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals	New Zealand Workplace Exposure Standards (WES)

1,2,4-TRIMETHYL BENZENE(95-63-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals	New Zealand Inventory of Chemicals (NZIoC)
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ETHYLBENZENE(100-41-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs	New Zealand Inventory of Chemicals (NZIoC)
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals	New Zealand Workplace Exposure Standards (WES)

SOLVENT NAPHTHA PETROLEUM, HEAVY AROMATIC(64742-94-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

New Zealand Inventory of Chemicals (NZIoC)
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NAPHTHA PETROLEUM, LIGHT AROMATIC SOLVENT(64742-95-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

New Zealand Inventory of Chemicals (NZIoC)
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Location Test Certificate

Subject to Regulation 55 of the Hazardous Substances (Classes 1 to 5 Controls) Regulations, a location test certificate is required when quantity greater than or equal to those indicated below are present.

Hazard Class	Quantity beyond which controls apply for closed containers	Quantity beyond which controls apply when use occurring in open containers
3.1C	500 L in containers greater than 5 L 1500 L in containers up to and including 5 L	250 L 250 L

Approved Handler

Subject to Regulation 56 of the Hazardous Substances (Classes 1 to 5 Controls) Regulations and Regulation 9 of the Hazardous Substances (Classes 6, 8, and 9 Controls) Regulations, the substance must be under the personal control of an Approved Handler when present in a quantity greater than or equal to those indicated below.

Class of substance	Quantities
Not Applicable	Not Applicable

Refer Group Standards for further information

Tracking Requirements

Not Applicable

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (methyl ethyl ketoxime; naphtha petroleum, light aromatic solvent; xylene; ethylbenzene; solvent naphtha petroleum, medium aliphatic; naphtha petroleum, heavy, hydrodesulfurised; 1,2,4-trimethyl benzene; solvent naphtha petroleum, heavy aromatic)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	N (solvent naphtha petroleum, medium aliphatic; naphtha petroleum, heavy, hydrodesulfurised)
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y

Continued...

RESENE KRISTAL CLEAR POLYURETHANE

Legend:*Y = All ingredients are on the inventory**N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)***SECTION 16 OTHER INFORMATION****Other information****Ingredients with multiple cas numbers**

Name	CAS No
naphtha petroleum, heavy, hydrodesulfurised	64742-82-1., 8052-41-3.
naphtha petroleum, light aromatic solvent	25550-14-5, 64742-95-6

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment.

Definitions and abbreviations

PC — TWA: Permissible Concentration-Time Weighted Average
PC — STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit,
IDLH: Immediately Dangerous to Life or Health Concentrations
OSF: Odour Safety Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index

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