RESENE ARMOURX GP METAL PRIMER

Resene Paints LTD

Version No: **1.1**
Safety Data Sheet according to the Health and Safety at Work (Hazardous Substances) Regulations 2017

Issue Date: **12/04/2024**
Print Date: **12/04/2024**
L.GHS.NZL.EN

SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier

Product name	RESENE ARMOURX GP METAL PRIMER
Synonyms	Not Available
Proper shipping name	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)
Other means of identification	Not Available

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

Relevant identified uses	11160

Details of the manufacturer or supplier of the safety data sheet

Registered company name	**Resene Paints LTD**
Address	32-50 Vogel Street Wellington 5011 New Zealand
Telephone	+64 4 5770500
Fax	+64 4 5773327
Website	www.resene.co.nz
Email	advice@resene.co.nz

Emergency telephone number

Association / Organisation	**NZ POISONS (24hr 7days)**	**CHEMWATCH EMERGENCY RESPONSE (24/7)**
Emergency telephone numbers	**0800 764766**	**+64 800 700 112**
Other emergency telephone numbers	**Not Available**	**+61 3 9573 3188**

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

Classification [1]	Flammable Liquids Category 3, Aspiration Hazard Category 1, Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 2, Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3, Carcinogenicity Category 2, Reproductive Toxicity Category 2, Hazardous to the Aquatic Environment Acute Hazard Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 2
Legend:	***1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI***
Determined by Chemwatch using GHS/HSNO criteria	3.1C, 6.1E (aspiration), 6.4A, 6.5B (contact), 6.7B, 6.8B, 6.9B (narcotic effects), 9.1A, 9.1B

Label elements

Hazard pictogram(s)	
Signal word	**Danger**

Hazard statement(s)

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.

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H361	Suspected of damaging fertility or the unborn child.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P271	Use only a well-ventilated area.
P280	Wear protective gloves, protective clothing, eye protection and face protection.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing mist/vapours/spray.
P273	Avoid release to the environment.
P264	Wash all exposed external body areas thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.

Precautionary statement(s) Response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider.
P331	Do NOT induce vomiting.
P308+P313	IF exposed or concerned: Get medical advice/ attention.
P370+P378	In case of fire: Use alcohol resistant foam or normal protein foam to extinguish.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Precautionary statement(s) Storage

P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures
Ingredients are required by the Hazard Substances (Safety Data Sheets) Notice 2017, EPA consolidation 30 April 2021 to be identified:

Mixtures

CAS No	%[weight]	Name
96-29-7	0.1-0.5	methyl ethyl ketoxime
64742-82-1.	20-40	naphtha petroleum, heavy, hydrodesulfurised
7779-90-0	1-10	zinc phosphate
1314-13-2	1-5	zinc oxide
13701-59-2	1-10	barium metaborate
64742-94-5	0.1-1	solvent naphtha petroleum, heavy aromatic
1330-20-7	0.1-1	xylene
100-41-4	0.1-1	ethylbenzene
Legend:	***1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L; * EU IOELVs available***	

SECTION 4 First aid measures

Description of first aid measures

Continued...

Eye Contact	If this product comes in contact with the eyes: ▸ Wash out immediately with fresh 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. ▸ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: ▸ 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	▸ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▸ Other measures are usually unnecessary.
Ingestion	▸ If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus. ▸ 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.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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

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 dioxide (CO_2) carbon monoxide (CO) metal oxides other pyrolysis products typical of burning organic material. Decomposes at high temperatures to produce barium oxide.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	Remove all ignition sources. Contain spill with inert non- combustible absorbent then place in suitable, labelled container for waste disposal. Wipe up. Clean area with large quantity of water to complete clean- up
Major Spills	Remove all ignition sources. Clear area of personnel and move upwind. Wear appropriate personnel protective equipment and clothing to prevent exposure. Avoid breathing in mists or vapours and skin or eyes contact. Extinguish or remove all sources of ignition and stop leak if safe to do so. Increase ventilation. Evacuate all unprotected personnel. If possible, contain the spill. Place inert absorbent, non- combustible material onto spillage. Use clean non- sparking tools to collect the material and place into suitable labelled containers for subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authority.

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

SECTION 7 Handling and storage

Precautions for safe handling

Continued...

Safe handling	▸ Containers, even those that have been emptied, may contain explosive vapours. ▸ Avoid unnecessary 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	strong oxidisers

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	Stoddard solvent (White spirits)	100 ppm / 525 mg/m3	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	zinc phosphate	Respirable dust (not otherwise classified)	3 mg/m3	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	zinc phosphate	Inhalable dust (not otherwise classified)	10 mg/m3	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	zinc oxide	Zinc oxide	2 mg/m3	5 mg/m3	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	zinc oxide	Zinc oxide respirable dust	0.1 mg/m3	0.5 mg/m3	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	barium metaborate	Barium, soluble compounds, as Ba	0.5 mg/m3	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	xylene	Dimethylbenzene	50 ppm / 217 mg/m3	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	ethylbenzene	Ethyl benzene	20 ppm / 88 mg/m3	176 mg/m3 / 40 ppm	Not Available	(skin) - Skin absorption oto - Ototoxin

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
methyl ethyl ketoxime	30 ppm	56 ppm	250 ppm
naphtha petroleum, heavy, hydrodesulfurised	300 mg/m3	1,800 mg/m3	29500** mg/m3
zinc phosphate	12 mg/m3	36 mg/m3	220 mg/m3
zinc oxide	10 mg/m3	15 mg/m3	2,500 mg/m3
barium metaborate	2.4 mg/m3	300 mg/m3	1,800 mg/m3
xylene	Not Available	Not Available	Not Available
ethylbenzene	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
methyl ethyl ketoxime	Not Available	Not Available
naphtha petroleum, heavy, hydrodesulfurised	20,000 mg/m3	Not Available
zinc phosphate	Not Available	Not Available
zinc oxide	500 mg/m3	Not Available
barium metaborate	50 mg/m3	Not Available
solvent naphtha petroleum, heavy aromatic	Not Available	Not Available
xylene	900 ppm	Not Available
ethylbenzene	800 ppm	Not Available

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
methyl ethyl ketoxime	D	> 0.1 to ≤ 1 ppm
Notes:	***Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.***	

MATERIAL DATA

IFRA Prohibited Fragrance Substance
The International Fragrance Association (IFRA) Standards form the basis for the globally accepted and recognized risk management system for the safe use of fragrance ingredients and are part of the IFRA Code of Practice.

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CAUTION: This substance is classified by the NOHSC as Category 3 Suspected of having carcinogenic potential
for zinc oxide:
Zinc oxide intoxication (intoxication zincale) is characterised by general depression, shivering, headache, thirst, colic and diarrhoea.
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.
These exposure guidelines have been derived from a screening level of risk assessment and should not be construed as unequivocally safe limits.
for barium compounds:
The recommended TLV-TWA is based on satisfactory results achieved while employing an internal limit for barium nitrate at a national laboratory.
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.
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).

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard.
Individual protection measures, such as personal protective equipment	
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. **NOTE:** ‣ The material may produce skin sensitisation in predisposed individuals. 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	Overalls
Respiratory protection	Respiratory protection required in insufficiently ventilated working areas and during spraying. An approved respirator with a replaceable vapour/ mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to AS/NZS 1715 Standard, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716 Standard, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances. Recommended filter type: Type A filter (organic vapour).

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Dispersion with aromatic odour

Physical state	Liquid	**Relative density (Water = 1)**	1.27-1.33
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Available
pH (as supplied)	Not Available	**Decomposition temperature (°C)**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	Not Available
Initial boiling point and boiling range (°C)	150-170	**Molecular weight (g/mol)**	Not Available
Flash point (°C)	35-40	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available

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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)**	52
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water	Immiscible	**pH as a solution (1%)**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	421

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	▸ stable
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

Information on toxicological effects

Inhaled	Inhalation of vapours may cause drowsiness and dizziness. High inhaled concentrations of mixed hydrocarbons may produce narcosis characterised by nausea, vomiting and lightheadedness. Central nervous system (CNS) depression may include nonspecific discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. A significant number of individuals exposed to mixed trimethylbenzenes complained of nervousness, tension, anxiety and asthmatic bronchitis. Acute effects from inhalation of high concentrations of vapour are pulmonary irritation, including coughing, with nausea; central nervous system depression - characterised by headache and dizziness, increased reaction time, fatigue and loss of co-ordination The acute toxicity of inhaled alkylbenzene is best described by central nervous system depression. Headache, fatigue, lassitude, irritability and gastrointestinal disturbances (e.g., nausea, anorexia and flatulence) are the most common symptoms of xylene overexposure. Xylene is a central nervous system depressant. Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful.
Ingestion	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. All cases of acute oral barium poisoning in adults exhibit gastrointestinal disturbances as the initial symptoms. Symptoms of borate poisoning include nausea, vomiting, diarrhoea, epigastric pain. Ingestion of petroleum hydrocarbons may produce irritation of the pharynx, oesophagus, stomach and small intestine with oedema and mucosal ulceration resulting; symptoms include a burning sensation in the mouth and throat.
Skin Contact	Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions. Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Skin contact with the material may be harmful; systemic effects may result following absorption. Aromatic hydrocarbons may produce skin irritation, vasodilation with erythema and changes in endothelial cell permeability. The material produces moderate skin irritation; evidence exists, or practical experience predicts, that the material either ▸ produces moderate inflammation of the skin in a substantial number of individuals following direct contact, and/or ▸ produces significant, but moderate, inflammation when applied to the healthy intact skin of animals (for up to four hours), such inflammation being present twenty-four hours or more after the end of the exposure period.
Eye	Petroleum hydrocarbons may produce pain after direct contact with the eyes. The liquid produces a high level of eye discomfort and is capable of causing pain and severe conjunctivitis. Evidence exists, or practical experience predicts, that the material may cause severe eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals.
Chronic	Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems. Practical experience shows that skin contact with the material is capable either of inducing a sensitisation reaction in a substantial number of individuals, and/or of producing a positive response in experimental animals. On the basis, primarily, of animal experiments, the material may be regarded as carcinogenic to humans. There is sufficient evidence to provide a strong presumption that human exposure to the material may result in impaired fertility on the basis of: - clear evidence in animal studies of impaired fertility in the absence of toxic effects, or evidence of impaired fertility occurring at around the same dose levels as other toxic effects but which is not a secondary non-specific consequence of other toxic effects.

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Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.
Repeated or prolonged exposure to mixed hydrocarbons may produce narcosis with dizziness, weakness, irritability, concentration and/or memory loss, tremor in the fingers and tongue, vertigo, olfactory disorders, constriction of visual field, paraesthesias of the extremities, weight loss and anaemia and degenerative changes in the liver and kidney.
Follicular dermatitis may develop rapidly on repeated immersion of the hands and forearms in white spirits.
Workers exposed to barium compounds have been reported to show an increased incidence of hypertension, irritation of the respiratory system, and damage to the spleen, liver and bone marrow.
Prolonged or repeated contact with xylenes may cause defatting dermatitis with drying and cracking.
Chronic solvent inhalation exposures may result in nervous system impairment and liver and blood changes.

RESENE ARMOURX GP METAL PRIMER

TOXICITY	IRRITATION
Not Available	Not Available

methyl ethyl ketoxime

TOXICITY	IRRITATION
Dermal (rabbit) LD50: >184<1840 mg/kg[1]	Eye (rabbit): 0.1 ml - SEVERE
Inhalation (Rat) LC50: >4.83 mg/l4h[1]	
Oral (Rat) LD50: >900 mg/kg[1]	

naphtha petroleum, heavy, hydrodesulfurised

TOXICITY	IRRITATION
Dermal (rabbit) LD50: >1900 mg/kg[1]	Eye: no adverse effect observed (not irritating)[1]
Inhalation (Rat) LC50: >1.58 mg/l4h[1]	Skin: adverse effect observed (irritating)[1]
Oral (Rat) LD50: >4500 mg/kg[1]	Skin: no adverse effect observed (not irritating)[1]

zinc phosphate

TOXICITY	IRRITATION
Inhalation (Rat) LC50: >5.7 mg/L4h[1]	Eye: no adverse effect observed (not irritating)[1]
Oral (Rat) LD50: >5000 mg/kg[2]	Skin: no adverse effect observed (not irritating)[1]

zinc oxide

TOXICITY	IRRITATION
dermal (rat) LD50: >2000 mg/kg[1]	Eye (rabbit) : 500 mg/24 h - mild
Inhalation (Rat) LC50: >1.79 mg/l4h[1]	Eye: no adverse effect observed (not irritating)[1]
Oral (Rat) LD50: >5000 mg/kg[1]	Skin (rabbit) : 500 mg/24 h- mild
	Skin: no adverse effect observed (not irritating)[1]

barium metaborate

TOXICITY	IRRITATION
dermal (rat) LD50: >2000 mg/kg[2]	Eye: no adverse effect observed (not irritating)[1]
Inhalation (Rat) LC50: >3.54 mg/l4h[1]	Skin: no adverse effect observed (not irritating)[1]
Oral (Rat) LD50: 530 mg/kg[1]	

solvent naphtha petroleum, heavy aromatic

TOXICITY	IRRITATION
Dermal (rabbit) LD50: >2000 mg/kg[2]	Eye (rabbit): Irritating [PETROFIN]
Inhalation (Rat) LC50: >0.003 mg/L4h[1]	Eye: no adverse effect observed (not irritating)[1]
Oral (Rat) LD50: >2000 mg/kg[1]	Skin: adverse effect observed (irritating)[1]

xylene

TOXICITY	IRRITATION
Dermal (rabbit) LD50: >1700 mg/kg[2]	Eye (human): 200 ppm irritant
Inhalation (Rat) LC50: 5000 ppm4h[2]	Eye (rabbit): 5 mg/24h SEVERE
Oral (Mouse) LD50; 2119 mg/kg[2]	Eye (rabbit): 87 mg mild
	Eye: adverse effect observed (irritating)[1]
	Skin (rabbit):500 mg/24h moderate
	Skin: adverse effect observed (irritating)[1]

ethylbenzene

TOXICITY	IRRITATION
Dermal (rabbit) LD50: 17800 mg/kg[2]	Eye (rabbit): 500 mg - SEVERE
Inhalation (Rat) LC50: 17.2 mg/l4h[2]	Eye: no adverse effect observed (not irritating)[1]

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	Oral (Rat) LD50: 3500 mg/kg[2]	Skin (rabbit): 15 mg/24h mild
		Skin: no adverse effect observed (not irritating)[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***	

RESENE ARMOURX GP METAL PRIMER	Data demonstrate that during inhalation exposure,aromatic hydrocarbons undergo substantial partitioning into adipose tissues.
METHYL ETHYL KETOXIME	Mammalian lymphocyte mutagen *Huls Canada ** Merck For methyl ethyl ketoxime (MEKO) **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.
NAPHTHA PETROLEUM, HEAVY, HYDRODESULFURISED	No significant acute toxicological data identified in literature search. For C9 aromatics (typically trimethylbenzenes - TMBs) Acute Toxicity 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).
BARIUM METABORATE	Oral (rat) LD50: 850mg/kg Eye (human): Irritant Asthma-like symptoms may continue for months or even years after exposure to the material ends.
XYLENE	Reproductive effector in rats The substance is classified by IARC as Group 3: **NOT** classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing.
ETHYLBENZENE	Liver changes, utheral tract, effects on fertility, foetotoxicity, specific developmental abnormalities (musculoskeletal system) recorded. Ethylbenzene is readily absorbed following inhalation, oral, and dermal exposures, distributed throughout the body, and excreted primarily through urine. **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. **WARNING:** This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.
RESENE ARMOURX GP METAL PRIMER & METHYL ETHYL KETOXIME	The following information refers to contact allergens as a group and may not be specific to this product.
RESENE ARMOURX GP METAL PRIMER & NAPHTHA PETROLEUM, HEAVY, HYDRODESULFURISED & SOLVENT NAPHTHA PETROLEUM, HEAVY AROMATIC	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.
RESENE ARMOURX GP METAL PRIMER & NAPHTHA PETROLEUM, HEAVY, HYDRODESULFURISED	For trimethylbenzenes: Absorption of 1,2,4-trimethylbenzene occurs after oral, inhalation, or dermal exposure.
NAPHTHA PETROLEUM, HEAVY, HYDRODESULFURISED & SOLVENT NAPHTHA PETROLEUM, HEAVY AROMATIC	For petroleum: This product contains benzene, which can cause acute myeloid leukaemia, and n-hexane, which can be metabolized to compounds which are toxic to the nervous system.
ZINC OXIDE & XYLENE & ETHYLBENZENE	The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic).
XYLENE & ETHYLBENZENE	The material may produce severe irritation to the eye causing pronounced inflammation.

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 either not available or does not fill the criteria for classification***
✓ ***– Data available to make classification***

SECTION 12 Ecological information

Toxicity

RESENE ARMOURX GP METAL PRIMER

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

methyl ethyl ketoxime

Endpoint	Test Duration (hr)	Species	Value	Source

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	BCF	1008h	Fish	0.5-0.6	7
	NOEC(ECx)	72h	Algae or other aquatic plants	~1.02mg/l	2
	EC50	72h	Algae or other aquatic plants	~6.09mg/l	2
	EC50	48h	Crustacea	~201mg/l	2
	LC50	96h	Fish	>100mg/l	2

naphtha petroleum, heavy, hydrodesulfurised

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	391mg/l	2
EC50(ECx)	72h	Algae or other aquatic plants	391mg/l	2
NOEC(ECx)	504h	Crustacea	0.097mg/l	2
EC50	72h	Algae or other aquatic plants	0.53mg/l	2
EC50	96h	Algae or other aquatic plants	0.58mg/l	2
NOEC(ECx)	720h	Fish	0.02mg/l	2
EC50	96h	Algae or other aquatic plants	0.277mg/l	2
LC50	96h	Fish	0.14mg/l	2

zinc phosphate

Endpoint	Test Duration (hr)	Species	Value	Source
EC10(ECx)	168h	Algae or other aquatic plants	0.003mg/L	2
EC50	72h	Algae or other aquatic plants	0.051mg/L	2
EC50	96h	Algae or other aquatic plants	0.042mg/L	2
EC50	48h	Crustacea	0.105mg/L	2
LC50	96h	Fish	0.09mg/L	4

zinc oxide

Endpoint	Test Duration (hr)	Species	Value	Source
ErC50	72h	Algae or other aquatic plants	0.62mg/l	2
LC50	96h	Fish	0.102mg/L	2
BCF	1344h	Fish	19-110	7
EC50	72h	Algae or other aquatic plants	0.022mg/L	2
EC50	48h	Crustacea	0.105mg/L	2
EC10(ECx)	168h	Algae or other aquatic plants	0.003mg/L	2
EC50	96h	Algae or other aquatic plants	0.042mg/L	2

barium metaborate

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96h	Fish	62mg/l	2
EC50	72h	Algae or other aquatic plants	2mg/l	2
EC50	48h	Crustacea	20.3mg/l	2
NOEC(ECx)	72h	Algae or other aquatic plants	1.1mg/l	2

solvent naphtha petroleum, heavy aromatic

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96h	Fish	2-5mg/l	Not Available
EC50(ECx)	48h	Crustacea	0.95mg/l	1
EC50	72h	Algae or other aquatic plants	<1mg/l	1
EC50	96h	Algae or other aquatic plants	11.7mg/l	2
EC50	48h	Crustacea	0.95mg/l	1

xylene

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96h	Fish	2.6mg/l	2
EC50	72h	Algae or other aquatic plants	4.6mg/l	2
EC50	48h	Crustacea	1.8mg/l	2
NOEC(ECx)	73h	Algae or other aquatic plants	0.44mg/l	2

ethylbenzene

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	2.4-9.8mg/L	4
LC50	96h	Fish	3.381-4.075mg/L	4
EC50	48h	Crustacea	1.37-4.4mg/l	4
EC50(ECx)	24h	Algae or other aquatic plants	0.02-938mg/L	4
EC50	96h	Algae or other aquatic plants	1.7-7.6mg/L	4

Continued...

Legend:	***Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 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***

Very 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.
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.
For Aromatic Substances Series:
Environmental Fate: Large, molecularly complex polycyclic aromatic hydrocarbons, or PAHs, are persistent in the environment longer than smaller PAHs.
For petroleum distillates:
Environmental fate:
When petroleum substances are released into the environment, four major fate processes will take place: dissolution in water, volatilization, biodegradation and adsorption.
For C9 aromatics (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 barium and its compounds::
Environmental fate:
The length of time that barium will last in air, land, water, or sediments following release of barium into these media depends on the form of barium released.
For Xylenes:
log Koc : 2.05-3.08; Koc : 25.4-204; Half-life (hr) air : 0.24-42; Half-life (hr) H2O surface water : 24-672; Half-life (hr) H2O ground : 336-8640; Half-life (hr) soil : 52-672; Henry's Pa m3 /mol : 637-879; Henry'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.
For boron and borates:
Environmental fate:
Boron is generally found in nature bound to oxygen and is never found as the free element.
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)
ethylbenzene	HIGH (Half-life = 228 days)	LOW (Half-life = 3.57 days)

Bioaccumulative potential

Ingredient	Bioaccumulation
methyl ethyl ketoxime	LOW (BCF = 5.8)
zinc oxide	LOW (BCF = 217)
solvent naphtha petroleum, heavy aromatic	LOW (BCF = 159)
xylene	MEDIUM (BCF = 740)
ethylbenzene	LOW (BCF = 79.43)

Mobility in soil

Ingredient	Mobility
methyl ethyl ketoxime	LOW (Log KOC = 130.8)
ethylbenzene	LOW (Log KOC = 517.8)

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal	▸ 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. Consult manufacturer for recycling option. Resene Paintwise accepts residual unwanted paint and packaging. See Resene website for Paintwise information. Or contact a Local Authority for the disposal information. Do not discharge the substance into the environment.

Disposal Requirements

Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and cleaned out from the package.
Do not allow product or wash water from cleaning or process equipment to enter drains or watercourses. It may be necessary to collect all wash water for treatment before disposal. The generation of waste should be avoided or minimised wherever possible.
Disposal of this product should comply with Hazard Substances (Disposal) Notice 2017 (EPA Consolidation 30 April 2021) and local regulations.
Flammable substance can be disposed of if the substance is treated by using a method that changes the characteristics or composition of the substance so that the substance is no longer a hazardous substance, or exporting the substance from New Zealand as waste.
For treating and discharging processes contact your local authority.

The treating may include burning the substance if the burning is managed to ensure that no person, or place where a person may legally be present.

Continued...

The substance may be discharged into the environment as waste or disposed into a landfill if the substance will not come into contact with oxidising substances and where is no ignition source which is capable to ignite the substance.

SECTION 14 Transport information

Labels Required

	
Marine Pollutant	
HAZCHEM	•3Y

Land transport (UN)

14.1. **UN number or ID number**	1263
14.2. **UN proper shipping name**	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)
14.3. **Transport hazard class(es)**	Class: 3 Subsidiary Hazard: Not Applicable
14.4. **Packing group**	III
14.5. **Environmental hazard**	Environmentally hazardous
14.6. **Special precautions for user**	Special provisions: 163; 223; 367 Limited quantity: 5 L

Air transport (ICAO-IATA / DGR)

14.1. **UN number**	1263
14.2. **UN proper shipping name**	Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)
14.3. **Transport hazard class(es)**	ICAO/IATA Class: 3 ICAO / IATA Subsidiary Hazard: Not Applicable ERG Code: 3L
14.4. **Packing group**	III
14.5. **Environmental hazard**	Environmentally hazardous
14.6. **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)

14.1. **UN number**	1263
14.2. **UN proper shipping name**	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)
14.3. **Transport hazard class(es)**	IMDG Class: 3 IMDG Subsidiary Hazard: Not Applicable
14.4. **Packing group**	III
14.5 **Environmental hazard**	Marine Pollutant
14.6. **Special precautions for user**	EMS Number: F-E , S-E Special provisions: 163 223 367 955 Limited Quantities: 5 L

Continued...

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

Not Applicable

14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
methyl ethyl ketoxime	Not Available
naphtha petroleum, heavy, hydrodesulfurised	Not Available
zinc phosphate	Not Available
zinc oxide	Not Available
barium metaborate	Not Available
solvent naphtha petroleum, heavy aromatic	Not Available
xylene	Not Available
ethylbenzene	Not Available

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
methyl ethyl ketoxime	Not Available
naphtha petroleum, heavy, hydrodesulfurised	Not Available
zinc phosphate	Not Available
zinc oxide	Not Available
barium metaborate	Not Available
solvent naphtha petroleum, heavy aromatic	Not Available
xylene	Not Available
ethylbenzene	Not Available

SECTION 15 Regulatory information

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 Carcinogenic Group Standard 2020

Please refer to Section 8 of the SDS for any applicable tolerable exposure limit or Section 12 for environmental exposure limit.

methyl ethyl ketoxime is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
New Zealand Approved Hazardous Substances with controls
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data
New Zealand Inventory of Chemicals (NZIoC)

naphtha petroleum, heavy, hydrodesulfurised is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic
New Zealand Approved Hazardous Substances with controls
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals
New Zealand Inventory of Chemicals (NZIoC)
New Zealand Land Transport Rule; Dangerous Goods 2005 - Schedule 2 Dangerous Goods in Limited Quantities and Consumer Commodities
New Zealand Workplace Exposure Standards (WES)

zinc phosphate is found on the following regulatory lists

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data
New Zealand Inventory of Chemicals (NZIoC)
New Zealand Land Transport Rule: Dangerous Goods 2005 - Schedule 1 Quantity limits for dangerous goods
New Zealand Workplace Exposure Standards (WES)

zinc oxide is found on the following regulatory lists

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data
New Zealand Inventory of Chemicals (NZIoC)
New Zealand Land Transport Rule: Dangerous Goods 2005 - Schedule 1 Quantity limits for dangerous goods
New Zealand Workplace Exposure Standards (WES)

Continued...

barium metaborate is found on the following regulatory lists

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data
New Zealand Inventory of Chemicals (NZIoC)
New Zealand Workplace Exposure Standards (WES)

solvent naphtha petroleum, heavy aromatic is found on the following regulatory lists

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic
New Zealand Inventory of Chemicals (NZIoC)
New Zealand Land Transport Rule: Dangerous Goods 2005 - Schedule 1 Quantity limits for dangerous goods

xylene is found on the following regulatory lists

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic
New Zealand Approved Hazardous Substances with controls
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data
New Zealand Inventory of Chemicals (NZIoC)
New Zealand Workplace Exposure Standards (WES)

ethylbenzene is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B: Possibly carcinogenic to humans
New Zealand Approved Hazardous Substances with controls
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data
New Zealand Inventory of Chemicals (NZIoC)
New Zealand Workplace Exposure Standards (WES)

Additional Regulatory Information

Not Applicable

Hazardous Substance Location

Subject to the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Hazard Class	Quantity (Closed Containers)	Quantity (Open Containers)
3.1C	500 L in containers more than 5 L	250 L
3.1C	1 500 L in containers up to and including 5 L	250 L

Certified Handler

Subject to Part 4 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Class of substance	Quantities
Not Applicable	Not Applicable

Refer Group Standards for further information

Maximum quantities of certain hazardous substances permitted on passenger service vehicles

Subject to Regulation 13.14 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Hazard Class	Gas (aggregate water capacity in mL)	Liquid (L)	Solid (kg)	Maximum quantity per package for each classification
6.5A or 6.5B	120	1	3	
3.1C or 3.1D				10 L

Tracking Requirements

Not Applicable

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Europe - EINEC / ELINCS / NLP	
New Zealand - NZIoC	Yes
Legend:	***Yes = All CAS declared ingredients are on the inventory*** ***No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.***

SECTION 16 Other information

Revision Date	12/04/2024
Initial Date	12/04/2024

Other information

Continued...

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
- ES: Exposure Standard
- 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
- DNEL: Derived No-Effect Level
- PNEC: Predicted no-effect concentration

- AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSL: Non-Domestic Substances List
- IECSC: Inventory of Existing Chemical Substance in China
- EINECS: European INventory of Existing Commercial chemical Substances
- ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ENCS: Existing and New Chemical Substances Inventory
- KECI: Korea Existing Chemicals Inventory
- NZIoC: New Zealand Inventory of Chemicals
- PICCS: Philippine Inventory of Chemicals and Chemical Substances
- TSCA: Toxic Substances Control Act
- TCSI: Taiwan Chemical Substance Inventory
- INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
- FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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Continued...

end of SDS