

# RESENE 81A ETCH PRIMER

## RESENE AUTOMOTIVE & LIGHT INDUSTRIAL

Version No: 1.4.7.9

Safety Data Sheet according to the Health and Safety at Work (Hazardous Substances) Regulations 2017

Issue Date: 17/08/2021

Print Date: 17/08/2021

L.GHS.NZL.EN

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

#### Product Identifier

Product name	RESENE 81A ETCH PRIMER
Chemical Name	Not Applicable
Synonyms	Not Available
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	10547
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#### Details of the supplier of the safety data sheet

Registered company name	RESENE AUTOMOTIVE & LIGHT INDUSTRIAL
Address	32-50 Vogel Street Naenae Wellington New Zealand
Telephone	+64 4 5770500
Fax	+64 4 5773327
Website	<a href="http://www.resene.co.nz">www.resene.co.nz</a>
Email	advice@resene.co.nz

#### Emergency telephone number

Association / Organisation	NZ POISONS (24hr 7 days)	CHEMWATCH EMERGENCY RESPONSE
Emergency telephone numbers	0800 764766	+61 2 9186 1132
Other emergency telephone numbers	0800 737636	+64 800 700 112

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]	Hazardous to the Aquatic Environment Long-Term Hazard Category 2, Specific Target Organ Toxicity - Repeated Exposure Category 2, Flammable Liquids Category 2, Serious Eye Damage/Eye Irritation Category 1, Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 2, Reproductive Toxicity Category 2, Sensitisation (Skin) Category 1, Germ Cell Mutagenicity 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	3.1B, 6.1D (oral), 6.3A, 8.3A, 6.5B (contact), 6.6B, 6.8B, 6.9B, 9.1B

#### Label elements

Hazard pictogram(s)	
Signal word	Danger

#### Hazard statement(s)

H411	Toxic to aquatic life with long lasting effects.
H373	May cause damage to organs through prolonged or repeated exposure. (Oral, Dermal, Inhalation)
H225	Highly flammable liquid and vapour.
H318	Causes serious eye damage.
H302	Harmful if swallowed.
H315	Causes skin irritation.

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H361	Suspected of damaging fertility or the unborn child.
H317	May cause an allergic skin reaction.
H341	Suspected of causing genetic defects.

## 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.
P233	Keep container tightly closed.
P260	Do not breathe mist/vapours/spray.
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.
P264	Wash all exposed external body areas thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P272	Contaminated work clothing should not be allowed out of the workplace.

## Precautionary statement(s) Response

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/ attention.
P310	Immediately call a POISON CENTER/doctor/physician/first aider.
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.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider if you feel unwell.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P330	Rinse mouth.

## 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.
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## 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
108-88-3	10-20	<u>toluene</u>
78-93-3	10-20	<u>methyl ethyl ketone</u>
67-64-1	1-10	<u>acetone</u>
71-36-3	1-10	<u>n-butanol</u>
95-63-6	1-10	<u>1,2,4-trimethyl benzene</u>
108-95-2	0.1-1	<u>phenol</u>

**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

Eye Contact	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Immediately hold eyelids apart and flush the eye continuously with running water.</li> <li>▶ 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.</li> </ul>
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	<ul style="list-style-type: none"> <li>▶ Continue flushing for at least 15 minutes.</li> <li>▶ Transport to hospital or doctor without delay.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin Contact</b>	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>▶ Other measures are usually unnecessary.</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>▶ If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.</li> <li>▶ <b>If swallowed do NOT induce vomiting.</b></li> <li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>▶ Observe the patient carefully.</li> <li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>▶ Seek medical advice.</li> </ul>

**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**

<b>Fire Incompatibility</b>	▶ 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**

<b>Fire Fighting</b>	▶ Alert Fire Brigade and tell them location and nature of hazard.
<b>Fire/Explosion Hazard</b>	<ul style="list-style-type: none"> <li>▶ Liquid and vapour are highly flammable.</li> </ul> <p>Combustion products include: carbon dioxide (CO<sub>2</sub>) other pyrolysis products typical of burning organic material.</p>

**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**

<b>Minor Spills</b>	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.
<b>Major Spills</b>	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**

<b>Safe handling</b>	<p>Even with proper grounding and bonding, this material can still accumulate an electrostatic charge.</p> <ul style="list-style-type: none"> <li>▶ Containers, even those that have been emptied, may contain explosive vapours.</li> </ul> <p><b>Contains low boiling substance:</b></p> <p>Storage in sealed containers may result in pressure buildup causing violent rupture of containers not rated appropriately.</p> <ul style="list-style-type: none"> <li>▶ Electrostatic discharge may be generated during pumping - this may result in fire.</li> <li>▶ Avoid unnecessary personal contact, including inhalation.</li> <li>▶ <b>DO NOT allow clothing wet with material to stay in contact with skin</b></li> </ul>
<b>Other information</b>	▶ Store in original containers in approved flame-proof area.

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## Conditions for safe storage, including any incompatibilities

Suitable container	▸ Packing as supplied by manufacturer.
Storage incompatibility	▸ reacts violently with strong oxidiser

## 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)	toluene	Toluene (Toluol)	50 ppm / 188 mg/m <sup>3</sup>	Not Available	Not Available	skin-Skin absorption
New Zealand Workplace Exposure Standards (WES)	methyl ethyl ketone	MEK (Methyl ethyl ketone, 2-Butanone)	150 ppm / 445 mg/m <sup>3</sup>	890 mg/m <sup>3</sup> / 300 ppm	Not Available	bio-Exposure can also be estimated by biological monitoring.
New Zealand Workplace Exposure Standards (WES)	acetone	Acetone	500 ppm / 1185 mg/m <sup>3</sup>	2375 mg/m <sup>3</sup> / 1000 ppm	Not Available	bio-Exposure can also be estimated by biological monitoring.
New Zealand Workplace Exposure Standards (WES)	n-butanol	n-Butyl alcohol	Not Available	Not Available	50 ppm / 150 mg/m <sup>3</sup>	skin-Skin absorption
New Zealand Workplace Exposure Standards (WES)	phenol	Phenol	5 ppm	Not Available	Not Available	skin-Skin absorption

## Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
toluene	Not Available	Not Available	Not Available
methyl ethyl ketone	Not Available	Not Available	Not Available
acetone	Not Available	Not Available	Not Available
n-butanol	60 ppm	800 ppm	8000** ppm
1,2,4-trimethyl benzene	140 mg/m <sup>3</sup>	360 mg/m <sup>3</sup>	2,200 mg/m <sup>3</sup>
1,2,4-trimethyl benzene	Not Available	Not Available	480 ppm
phenol	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
toluene	500 ppm	Not Available
methyl ethyl ketone	3,000 ppm	Not Available
acetone	2,500 ppm	Not Available
n-butanol	1,400 ppm	Not Available
1,2,4-trimethyl benzene	Not Available	Not Available
phenol	250 ppm	Not Available

## Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
1,2,4-trimethyl benzene	E	≤ 0.1 ppm
<b>Notes:</b>	<i>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.</i>	

## 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.

Odour Threshold Value: 3.6 ppm (detection), 699 ppm (recognition)

NOTE: Detector tubes measuring in excess of 40 ppm, are available.

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 toluene:

Odour Threshold Value: 0.16-6.7 (detection), 1.9-69 (recognition)

NOTE: Detector tubes measuring in excess of 5 ppm, are available.

For methyl ethyl ketone:

Odour Threshold Value: Various reported as 2 ppm and 4.8 ppm

Odour threshold: 2 ppm (detection); 5 ppm (recognition) 25 ppm (easy recognition); 300 ppm IRRITATING

Exposures at or below the recommended TLV-TWA are thought to prevent injurious systemic effects and to minimise objections to odour and irritation.

For n-butanol:

Odour Threshold Value: 0.12-3.4 ppm (detection), 1.0-3.5 ppm (recognition)

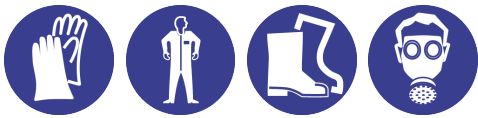
NOTE: Detector tubes for n-butanol, measuring in excess of 5 ppm are commercially available.

Odour Threshold Value for phenol: 0.060 ppm (detection)

NOTE: Detector tubes for phenol, measuring in excess of 1 ppm, are commercially available.

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## Exposure controls

<b>Appropriate engineering controls</b>	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard.
<b>Personal protection</b>	
<b>Eye and face protection</b>	▸ Safety glasses with side shields.
<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	<ul style="list-style-type: none"> <li>▸ Wear chemical protective gloves, e.g. PVC.</li> </ul> <b>NOTE:</b> <ul style="list-style-type: none"> <li>▸ The material may produce skin sensitisation in predisposed individuals.</li> <li>▸ 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.</li> </ul>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<ul style="list-style-type: none"> <li>▸ Employees working with confirmed human carcinogens should be provided with, and be required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area.</li> <li>▸ Prior to each exit from an area containing confirmed human carcinogens, employees should be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal.</li> <li>▸ Overalls.</li> <li>▸ Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.</li> </ul>

## 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.

Type AX Filter of sufficient capacity.

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Required minimum protection factor	Maximum gas/vapour concentration present in air p.p.m. (by volume)	Half-face Respirator	Full-Face Respirator
up to 10	1000	AX-AUS / Class 1	-
up to 50	1000	-	AX-AUS / Class 1
up to 50	5000	Airline *	-
up to 100	5000	-	AX-2
up to 100	10000	-	AX-3
100+		-	Airline**

\*\* - Continuous-flow or positive pressure demand.

A(All classes) = Organic vapours, B AUS or B1 = Acid gases, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 deg C)

## SECTION 9 Physical and chemical properties

## Information on basic physical and chemical properties

<b>Appearance</b>	Yellow dispersion with characteristic odour		
<b>Physical state</b>	Liquid	<b>Relative density (Water = 1)</b>	0.95-1.00
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	466
<b>pH (as supplied)</b>	Not Available	<b>Decomposition temperature</b>	Not Available
<b>Melting point / freezing point (°C)</b>	Not Available	<b>Viscosity (cSt)</b>	Not Available
<b>Initial boiling point and boiling range (°C)</b>	56-148	<b>Molecular weight (g/mol)</b>	Not Available
<b>Flash point (°C)</b>	8	<b>Taste</b>	Not Available

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<b>Evaporation rate</b>	Not Available BuAC = 1	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	HIGHLY FLAMMABLE.	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	10.3	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Available
<b>Lower Explosive Limit (%)</b>	1.7	<b>Volatile Component (%vol)</b>	85
<b>Vapour pressure (kPa)</b>	5.94	<b>Gas group</b>	Not Available
<b>Solubility in water</b>	Immiscible	<b>pH as a solution (%)</b>	Not Available
<b>Vapour density (Air = 1)</b>	2.7	<b>VOC g/L</b>	695

## SECTION 10 Stability and reactivity

<b>Reactivity</b>	See section 7
<b>Chemical stability</b>	▶ stable
<b>Possibility of hazardous reactions</b>	See section 7
<b>Conditions to avoid</b>	See section 7
<b>Incompatible materials</b>	See section 7
<b>Hazardous decomposition products</b>	See section 5

## SECTION 11 Toxicological information

## Information on toxicological effects

<b>Inhaled</b>	<p>Inhalation of vapours may cause drowsiness and dizziness.</p> <p>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</p> <p>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.</p> <p>Material is highly volatile and may quickly form a concentrated atmosphere in confined or unventilated areas.</p> <p>The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing.</p> <p>Acute exposure of humans to high concentrations of methyl ethyl ketone produces irritation to the eyes, nose, and throat.</p>
<b>Ingestion</b>	<p>At sufficiently high doses the material may be hepatotoxic (i.e. poisonous to the liver).</p> <p>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.</p>
<b>Skin Contact</b>	<p>Evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant 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.</p> <p>The material may accentuate any pre-existing dermatitis condition</p> <p>Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects.</p>
<b>Eye</b>	When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation.
<b>Chronic</b>	<p>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.</p> <p>Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.</p> <p>Serious damage (clear functional disturbance or morphological change which may have toxicological significance) is likely to be caused by repeated or prolonged exposure.</p> <p>There is sufficient evidence to establish a causal relationship between human exposure to the material and impaired fertility</p> <p>Chronic toluene habituation occurs following intentional abuse (glue sniffing) or from occupational exposure.</p> <p>Limited information is available on the chronic (long-term) effects of methyl ethyl ketone in humans.</p>

<b>RESENE 81A ETCH PRIMER</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Not Available	Not Available
<b>toluene</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Dermal (rabbit) LD50: >5000 mg/kg <sup>[1]</sup>	Eye (rabbit): 2mg/24h - SEVERE
	Inhalation(Rat) LC50; 12.5-28.8 mg/4h <sup>[2]</sup>	Eye (rabbit):0.87 mg - mild
	Oral(Rat) LD50; 636 mg/kg <sup>[2]</sup>	Eye (rabbit):100 mg/30sec - mild
		Eye: adverse effect observed (irritating) <sup>[1]</sup>

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		Skin (rabbit):20 mg/24h-moderate
		Skin (rabbit):500 mg - moderate
		Skin: adverse effect observed (irritating) <sup>[1]</sup>
		Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
methyl ethyl ketone	<b>TOXICITY</b>	<b>IRRITATION</b>
	Dermal (rabbit) LD50: ~6400-8000 mg/kg <sup>[2]</sup>	Eye (human): 350 ppm -irritant
	Inhalation(Mouse) LC50; 32 mg/L4h <sup>[2]</sup>	Eye (rabbit): 80 mg - irritant
	Oral(Rat) LD50; 2054 mg/kg <sup>[1]</sup>	Skin (rabbit): 402 mg/24 hr - mild
		Skin (rabbit):13.78mg/24 hr open
acetone	<b>TOXICITY</b>	<b>IRRITATION</b>
	Dermal (rabbit) LD50: 20 mg/kg <sup>[2]</sup>	Eye (human): 500 ppm - irritant
	Inhalation(Mouse) LC50; 44 mg/L4h <sup>[2]</sup>	Eye (rabbit): 20mg/24hr -moderate
	Oral(Rat) LD50; 1738 mg/kg <sup>[1]</sup>	Eye (rabbit): 3.95 mg - SEVERE
		Eye: adverse effect observed (irritating) <sup>[1]</sup>
		Skin (rabbit): 500 mg/24hr - mild
		Skin (rabbit):395mg (open) - mild
	Skin: no adverse effect observed (not irritating) <sup>[1]</sup>	
n-butanol	<b>TOXICITY</b>	<b>IRRITATION</b>
	Dermal (rabbit) LD50: ~3430 mg/kg <sup>[1]</sup>	Eye (human): 50 ppm - irritant
	Inhalation(Rat) LC50; >17.76 mg/L4h <sup>[2]</sup>	Eye (rabbit): 1.6 mg-SEVERE
	Oral(Mouse) LD50; 100 mg/kg <sup>[2]</sup>	Eye (rabbit): 24 mg/24h-SEVERE
		Eye: adverse effect observed (irreversible damage) <sup>[1]</sup>
	Skin (rabbit): 405 mg/24h-moderate	
	Skin: adverse effect observed (irritating) <sup>[1]</sup>	
1,2,4-trimethyl benzene	<b>TOXICITY</b>	<b>IRRITATION</b>
	Dermal (rabbit) LD50: >3160 mg/kg <sup>[2]</sup>	Not Available
	Inhalation(Rat) LC50; 10.2 mg/L4h <sup>[1]</sup>	
	Oral(Rat) LD50; 6000 mg/kg <sup>[1]</sup>	
phenol	<b>TOXICITY</b>	<b>IRRITATION</b>
	dermal (rat) LD50: 525 mg/kg <sup>[1]</sup>	Eye(rabbit): 100 mg rinse - mild
	Inhalation(Mouse) LC50; 0.177 mg/L4h <sup>[2]</sup>	Eye(rabbit): 5 mg - SEVERE
	Oral(Mouse) LD50; 270 mg/kg <sup>[2]</sup>	Skin(rabbit): 500 mg open -SEVERE
		Skin(rabbit): 500 mg/24hr - SEVERE
<b>Legend:</b>	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	

<b>RESENE 81A ETCH PRIMER</b>	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. Data demonstrate that during inhalation exposure,aromatic hydrocarbons undergo substantial partitioning into adipose tissues.
<b>TOLUENE</b>	For toluene: <b>Acute Toxicity</b> Humans exposed to intermediate to high levels of toluene for short periods of time experience adverse central nervous system effects ranging from headaches to intoxication, convulsions, narcosis, and death.
<b>ACETONE</b>	for acetone: The acute toxicity of acetone is low.
<b>N-BUTANOL</b>	for n-butanol <b>Acute toxicity:</b> n-Butanol (BA) was only slightly toxic to experimental animals following acute oral, dermal, or inhalation exposure.
<b>1,2,4-TRIMETHYL BENZENE</b>	Other Toxicity data is available for CHEMWATCH 12172 1,2,3-trimethylbenzene CHEMWATCH 2325 1,3,5-trimethylbenzene
<b>PHENOL</b>	The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic). The substance is classified by IARC as Group 3: <b>NOT</b> classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing.

## RESENE 81A ETCH PRIMER

RESENE 81A ETCH PRIMER & 1,2,4-TRIMETHYL BENZENE	For trimethylbenzenes: Absorption of 1,2,4-trimethylbenzene occurs after oral, inhalation, or dermal exposure.		
RESENE 81A ETCH PRIMER & METHYL ETHYL KETONE	Methyl ethyl ketone is considered to have a low order of toxicity; however methyl ethyl ketone is often used in combination with other solvents and the toxic effects of the mix may be greater than either solvent alone.		
TOLUENE & METHYL ETHYL KETONE & ACETONE & N-BUTANOL	The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic).		
METHYL ETHYL KETONE & N-BUTANOL & 1,2,4-TRIMETHYL BENZENE & PHENOL	Asthma-like symptoms may continue for months or even years after exposure to the material ceases.		
N-BUTANOL & PHENOL	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 81A ETCH PRIMER	Endpoint	Test Duration (hr)	Species	Value	Source
		Not Available	Not Available	Not Available	Not Available

toluene	Endpoint	Test Duration (hr)	Species	Value	Source
	LC50	96h	Fish	5-35mg/l	4
	EC50	48h	Crustacea	3.78mg/L	5
	NOEC(ECx)	168h	Crustacea	0.74mg/L	5
	EC50	96h	Algae or other aquatic plants	>376.71mg/L	4

methyl ethyl ketone	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	48h	Crustacea	68mg/l	2
	EC50	72h	Algae or other aquatic plants	1972mg/l	2
	LC50	96h	Fish	>324mg/L	4
	EC50	48h	Crustacea	308mg/l	2
EC50	96h	Algae or other aquatic plants	>500mg/l	4	

acetone	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	48h	Fish	0.001mg/L	4
	LC50	96h	Fish	>100mg/l	4
	EC50	48h	Crustacea	6098.4mg/L	5
EC50	96h	Algae or other aquatic plants	9.873-27.684mg/l	4	

n-butanol	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	504h	Crustacea	4.1mg/l	2
	EC50	72h	Algae or other aquatic plants	>500mg/l	1
	LC50	96h	Fish	100-500mg/l	4
	EC50	48h	Crustacea	>500mg/l	1
EC50	96h	Algae or other aquatic plants	225mg/l	2	

1,2,4-trimethyl benzene	Endpoint	Test Duration (hr)	Species	Value	Source
	BCF	1344h	Fish	31-207	7
	EC50(ECx)	96h	Algae or other aquatic plants	2.356mg/l	2
	LC50	96h	Fish	3.41mg/l	2
	EC50	96h	Algae or other aquatic plants	2.356mg/l	2
EC50	48h	Crustacea	ca.6.14mg/l	1	

Continued...



## RESENE 81A ETCH PRIMER

phenol	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	48.937-57.407mg/L	4
	LC50	96h	Fish	2.809-5.554mg/L	4
	EC50	48h	Crustacea	3.1mg/l	1
	EC10(ECx)	504h	Crustacea	0.05mg/l	2
	EC50	96h	Algae or other aquatic plants	10.6mg/L	4

**Legend:** *Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - 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*

Harmful to aquatic organisms.

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.

For aromatic hydrocarbons:

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

For methyl ethyl ketone:

log Kow : 0.26-0.69

log Koc : 0.69

Koc : 34

Half-life (hr) air : 2.3

Half-life (hr) H2O surface water : 72-288

Henry's atm m3 /mol: 1.05E-05

BOD 5 : 1.5-2.24, 46%

COD : 2.2-2.31, 100%

ThOD : 2.44

BCF : 1

**Environmental fate:**

TERRESTRIAL FATE: Measured Koc values of 29 and 34 were obtained for methyl ethyl ketone in silt loams.

For ketones:

Ketones, unless they are alpha, beta--unsaturated ketones, can be considered as narcosis or baseline toxicity compounds

Hydrolysis may also involve the addition of water to ketones to yield ketals under mild acid conditions.

For toluene:

log Kow : 2.1-3

log Koc : 1.12-2.85

Koc : 37-260

log Kom : 1.39-2.89

Half-life (hr) air : 2.4-104

Half-life (hr) H2O surface water : 5.55-528

Half-life (hr) H2O ground : 168-2628

Half-life (hr) soil : <48-240

Henry's Pa m3 /mol: 518-694

Henry's atm m3 /mol: 5.94E-03

BOD 5 0.86-2.12, 5%

COD : 0.7-2.52,21-27%

ThOD : 3.13

BCF : 1.67-380

log BCF : 0.22-3.28

**Environmental fate:**

**Transport:** The majority of toluene evaporates to the atmosphere from the water and soil. It is moderately retarded by adsorption to soils rich in organic material (Koc = 259), therefore, transport to ground water is dependent on the soil composition.

for acetone:

log Kow: -0.24

Half-life (hr) air: 312-1896

Half-life (hr) H2O surface water: 20

Henry's atm m3 /mol: 3.67E-05

BOD 5: 0.31-1.76,46-55%

COD: 1.12-2.07

ThOD: 2.2

BCF: 0.69

**Environmental fate:**

Acetone preferentially locates in the air compartment when released to the environment.

**DO NOT discharge into sewer or waterways.**

**Persistence and degradability**

Ingredient	Persistence: Water/Soil	Persistence: Air
toluene	LOW (Half-life = 28 days)	LOW (Half-life = 4.33 days)
methyl ethyl ketone	LOW (Half-life = 14 days)	LOW (Half-life = 26.75 days)
acetone	LOW (Half-life = 14 days)	MEDIUM (Half-life = 116.25 days)
n-butanol	LOW (Half-life = 54 days)	LOW (Half-life = 3.65 days)
1,2,4-trimethyl benzene	LOW (Half-life = 56 days)	LOW (Half-life = 0.67 days)
phenol	LOW (Half-life = 10 days)	LOW (Half-life = 0.95 days)

## RESENE 81A ETCH PRIMER

## Bioaccumulative potential

Ingredient	Bioaccumulation
toluene	LOW (BCF = 90)
methyl ethyl ketone	LOW (LogKOW = 0.29)
acetone	LOW (BCF = 0.69)
n-butanol	LOW (BCF = 0.64)
1,2,4-trimethyl benzene	LOW (BCF = 275)
phenol	LOW (BCF = 17.5)

## Mobility in soil

Ingredient	Mobility
toluene	LOW (KOC = 268)
methyl ethyl ketone	MEDIUM (KOC = 3.827)
acetone	HIGH (KOC = 1.981)
n-butanol	MEDIUM (KOC = 2.443)
1,2,4-trimethyl benzene	LOW (KOC = 717.6)
phenol	LOW (KOC = 268)

## SECTION 13 Disposal considerations

## Waste treatment methods

Product / Packaging disposal	<ul style="list-style-type: none"> <li>▶ Containers may still present a chemical hazard/ danger when empty.</li> <li>Legislation addressing waste disposal requirements may differ by country, state and/ or territory.</li> <li>▶ <b>DO NOT allow wash water from cleaning or process equipment to enter drains.</b></li> <li>▶ Recycle wherever possible.</li> <li>▶ Consult manufacturer for recycling option.</li> </ul> <p>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.</p>
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## 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.

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	*3YE

## Land transport (UN)

UN number	1263				
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)				
Transport hazard class(es)	<table border="1"> <tbody> <tr> <td>Class</td> <td>3</td> </tr> <tr> <td>Subrisk</td> <td>Not Applicable</td> </tr> </tbody> </table>	Class	3	Subrisk	Not Applicable
Class	3				
Subrisk	Not Applicable				
Packing group	II				

## RESENE 81A ETCH PRIMER

<b>Environmental hazard</b>	Environmentally hazardous	
<b>Special precautions for user</b>	Special provisions	163; 367
	Limited quantity	5 L

**Air transport (ICAO-IATA / DGR)**

<b>UN number</b>	1263	
<b>UN proper shipping name</b>	Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base); Paint related material (including paint thinning or reducing compounds)	
<b>Transport hazard class(es)</b>	ICAO/IATA Class	3
	ICAO / IATA Subrisk	Not Applicable
	ERG Code	3L
<b>Packing group</b>	II	
<b>Environmental hazard</b>	Environmentally hazardous	
<b>Special precautions for user</b>	Special provisions	A3 A72 A192
	Cargo Only Packing Instructions	364
	Cargo Only Maximum Qty / Pack	60 L
	Passenger and Cargo Packing Instructions	353
	Passenger and Cargo Maximum Qty / Pack	5 L
	Passenger and Cargo Limited Quantity Packing Instructions	Y341
	Passenger and Cargo Limited Maximum Qty / Pack	1 L

**Sea transport (IMDG-Code / GGVSee)**

<b>UN number</b>	1263	
<b>UN proper shipping name</b>	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)	
<b>Transport hazard class(es)</b>	IMDG Class	3
	IMDG Subrisk	Not Applicable
<b>Packing group</b>	II	
<b>Environmental hazard</b>	Marine Pollutant	
<b>Special precautions for user</b>	EMS Number	F-E , S-E
	Special provisions	163 367
	Limited Quantities	5 L

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

Not Applicable

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

Product name	Group
toluene	Not Available
methyl ethyl ketone	Not Available
acetone	Not Available
n-butanol	Not Available
1,2,4-trimethyl benzene	Not Available
phenol	Not Available

**Transport in bulk in accordance with the ICG Code**

Product name	Ship Type
toluene	Not Available
methyl ethyl ketone	Not Available
acetone	Not Available
n-butanol	Not Available
1,2,4-trimethyl benzene	Not Available
phenol	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

Continued...

## RESENE 81A ETCH PRIMER

HSR Number	Group Standard
HSR002662	Surface Coatings and Colourants Flammable Group Standard 2020

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

**toluene 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

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)

**methyl ethyl ketone is found on the following regulatory lists**

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)

**acetone is found on the following regulatory lists**

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)

**n-butanol is found on the following regulatory lists**

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)

**1,2,4-trimethyl benzene is found on the following regulatory lists**

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)

**phenol is found on the following regulatory lists**

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

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)

**Hazardous Substance Location**

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

Hazard Class	Quantity (Closed Containers)	Quantity (Open Containers)
3.1B	100 L in containers more than 5 L	50 L
3.1B	250 L in containers up to and including 5 L	50 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	
3.1B				1 L

**Tracking Requirements**

Not Applicable

**National Inventory Status**

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
New Zealand - NZIoC	Yes

## RESENE 81A ETCH PRIMER

National Inventory	Status
<b>Legend:</b>	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	17/08/2021
Initial Date	11/10/2017

**SDS Version Summary**

Version	Date of Update	Sections Updated
0.4.7.9	16/08/2021	Classification, Ingredients

**Other information**

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  
 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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