

RESENE 81B ETCH PRIMER CATALYST

RESENE AUTOMOTIVE & LIGHT INDUSTRIAL

Version No: 1.2

Safety Data Sheet according to HSNO Regulations

Issue Date: 29/06/2020

Print Date: 30/06/2020

L.GHS.NZL.EN

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

Product Identifier

Product name	RESENE 81B ETCH PRIMER CATALYST
Synonyms	Not Available
Proper shipping name	PAINT, FLAMMABLE, CORROSIVE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE (including paint thinning or reducing compound) (contains phosphoric acid)
Other means of identification	Not Available

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

Relevant identified uses	6164
--------------------------	------

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	www.resene.co.nz
Email	advice@resene.co.nz

Emergency telephone number

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

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]	Skin Corrosion/Irritation Category 1C, Acute Aquatic Hazard Category 3, Flammable Liquid Category 2, Metal Corrosion Category 1, Serious Eye Damage Category 1, Acute Toxicity (Oral) Category 4, Acute Vertebrate Hazard Category 3
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, 8.1A, 6.1D (oral), 8.2C, 8.3A, 9.1D, 9.3C

Label elements

Hazard pictogram(s)	
SIGNAL WORD	DANGER

Hazard statement(s)

H314	Causes severe skin burns and eye damage.
H402	Harmful to aquatic life.
H225	Highly flammable liquid and vapour.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H433	Harmful to terrestrial vertebrates.

Precautionary statement(s) Prevention

RESENE 81B ETCH PRIMER CATALYST

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.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P234	Keep only in original packaging.
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.
P270	Do not eat, drink or smoke when using this product.

Precautionary statement(s) Response

P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor/physician/first aider.
P321	Specific treatment (see advice on this label).
P370+P378	In case of fire: Use alcohol resistant foam or normal protein foam to extinguish.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
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

Mixtures

CAS No	%[weight]	Name
7664-38-2	1-10	<u>phosphoric acid</u>
67-63-0	40-80	<u>isopropanol</u>
71-36-3	1-10	<u>n-butanol</u>
108-10-1	1-10	<u>methyl isobutyl ketone</u>
67-64-1	1-10	<u>acetone</u>

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"> ▶ Immediately hold eyelids apart and flush the eye continuously with running water. ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▶ Continue flushing for at least 15 minutes. ▶ Immediately call a POISON CENTRE or doctor/ physician. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	<p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> ▶ Immediately flush body and clothes with large amounts of water, using safety shower if available. ▶ Quickly remove all contaminated clothing, including footwear. ▶ Wash skin and hair with running water. ▶ Transport to hospital, or doctor in event of irritation.
Inhalation	<p>If aerosols, fumes or combustion products are inhaled, remove affected person from contaminated area. Keep at rest until recovered. If symptoms develop seek medical attention. Transport to hospital, or doctor, without delay.</p>

RESENE 81B ETCH PRIMER CATALYST

Ingestion	<ul style="list-style-type: none"> ▶ For advice, contact a Poisons Information Centre or a doctor at once. ▶ Urgent hospital treatment is likely to be needed. ▶ 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. ▶ Transport to hospital or doctor without delay. ▶ If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.
------------------	---

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES**Extinguishing media**

- ▶ Alcohol stable 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	<ul style="list-style-type: none"> ▶ Combustible. Combustion products include: carbon monoxide (CO) carbon dioxide (CO ₂) other pyrolysis products typical of burning organic material. WARNING: Long standing in contact with air and light may result in the formation of potentially explosive peroxides.

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	Environmental hazard - contain spillage. <ul style="list-style-type: none"> ▶ Remove all ignition sources. ▶ Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material.
Major Spills	Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Wear appropriate personnel protective equipment and clothing to prevent exposure. Avoid breathing in mists or vapours and skin or eyes contact. Prevent, by any means available, spillage from entering drains or water course. Stop leak if safe to do so. Contain spill with sawdust, sand, earth, inert material or vermiculite then place in suitable, labelled container for waste disposal. Wipe up. Wash area and prevent runoff into drains. If contamination of drains or waterways occurs, advise emergency services.

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

SECTION 7 HANDLING AND STORAGE**Precautions for safe handling**

Safe handling	<ul style="list-style-type: none"> ▶ 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.

Conditions for safe storage, including any incompatibilities

Suitable container	<ul style="list-style-type: none"> ▶ DO NOT use aluminium or galvanised containers As supplied by manufacturer.
Storage incompatibility	Phosphoric acid: <ul style="list-style-type: none"> ▶ is a medium-strong acid which produces violent reaction with bases ▶ may produce violent react when water is added to the concentrated form

Continued...

RESENE 81B ETCH PRIMER CATALYST

- ▶ reacts violently with solutions containing ammonia or bleach
- ▶ at elevated temperatures attacks many metals producing hydrogen gas
- ▶ attacks glass, ceramics, and some plastics, rubber and coatings

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)	phosphoric acid	Phosphoric acid	1 mg/m3	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	isopropanol	Isopropyl alcohol	400 ppm / 983 mg/m3	1230 mg/m3 / 500 ppm	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	n-butanol	n-Butyl alcohol	Not Available	Not Available	50 ppm / 150 mg/m3	skin-Skin absorption
New Zealand Workplace Exposure Standards (WES)	methyl isobutyl ketone	Methyl isobutyl ketone (Hexone)	50 ppm / 205 mg/m3	307 mg/m3 / 75 ppm	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	acetone	Acetone	500 ppm / 1185 mg/m3	2375 mg/m3 / 1000 ppm	Not Available	bio-Exposure can also be estimated by biological monitoring.

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
phosphoric acid	Phosphoric acid	Not Available	Not Available	Not Available
isopropanol	Isopropyl alcohol	400 ppm	2000* ppm	12000** ppm
n-butanol	Butyl alcohol, n-; (n-Butanol)	60 ppm	800 ppm	8000** ppm
methyl isobutyl ketone	Methyl isobutyl ketone; (Hexone)	75 ppm	500 ppm	3000* ppm
acetone	Acetone	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
phosphoric acid	1,000 mg/m3	Not Available
isopropanol	2,000 ppm	Not Available
n-butanol	1,400 ppm	Not Available
methyl isobutyl ketone	500 ppm	Not Available
acetone	2,500 ppm	Not Available

MATERIAL DATA

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

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

The saturated vapour concentration of phosphoric acid exceeds the TLV.

Odour Threshold Value: 3.3 ppm (detection), 7.6 ppm (recognition)

Exposure at or below the recommended isopropanol TLV-TWA and STEL is thought to minimise the potential for inducing narcotic effects or significant irritation of the eyes or upper respiratory tract.

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.

for methyl isobutyl ketone (MIBK):

Unfatigued, odour recognition threshold (100% test panel) is 0.3 - 0.5 ppm.

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard.
Personal protection	
Eye and face protection	▶ Safety glasses with unperforated side shields may be used where continuous eye protection is desirable, as in laboratories; spectacles are not sufficient where complete eye protection is needed such as when handling bulk-quantities, where there is a danger of splashing, or if the material may be under pressure.
Skin protection	See Hand protection below
Hands/feet protection	▶ Elbow length PVC gloves ▶ When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer.
Body protection	See Other protection below
Other protection	▶ Overalls.

Respiratory protection

RESENE 81B ETCH PRIMER CATALYST

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 AB-P Filter of sufficient capacity.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Colourless to yellowish clear liquid with characteristic odour		
Physical state	Liquid	Relative density (Water = 1)	0.83
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	447
pH (as supplied)	Not Available	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	75	Molecular weight (g/mol)	Not Available
Flash point (°C)	11	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	HIGHLY FLAMMABLE.	Oxidising properties	Not Available
Upper Explosive Limit (%)	12	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	2.1	Volatile Component (%vol)	97
Vapour pressure (kPa)	5.12	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	2.3	VOC g/L	718

SECTION 10 STABILITY AND REACTIVITY

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

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	<p>Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may produce severely toxic effects; these may be fatal.</p> <p>Strong evidence exists that exposure to the material may produce very serious irreversible damage (other than carcinogenesis, mutagenesis and teratogenesis) following a single exposure by inhalation. Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system, in a substantial number of individuals, following inhalation.</p> <p>Acidic corrosives produce respiratory tract irritation with coughing, choking and mucous membrane damage. Inhalation of vapours may cause drowsiness and dizziness. Inhalation of quantities of liquid mist may be extremely hazardous, even lethal due to spasm, extreme irritation of larynx and bronchi, chemical pneumonitis and pulmonary oedema.</p>
Ingestion	<p>Ingestion of acidic corrosives may produce circumoral burns with a distinct discolouration of the mucous membranes of the mouth, throat and oesophagus. Swallowing of n-butanol may cause breathing difficulty, headache, nausea, vomiting, upper respiratory tract irritation, mucous membrane irritation, central nervous system depression. Ingestion of large quantity of phosphoric acid may cause severe abdominal pains, thirst, acidaemia, difficult breathing, convulsions, collapse, shock and death. Following ingestion, a single exposure to isopropyl alcohol produced lethargy and non-specific effects such as weight loss and irritation. 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.</p>

RESENE 81B ETCH PRIMER CATALYST

<p>Skin Contact</p>	<p>Strong evidence exists that exposure to the material may produce very serious irreversible damage (other than carcinogenesis, mutagenesis and teratogenesis) following a single exposure by skin contact.</p> <p>Skin contact with acidic corrosives may result in pain and burns; these may be deep with distinct edges and may heal slowly with the formation of scar tissue.</p> <p>Most liquid alcohols appear to act as primary skin irritants in humans.</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>														
<p>Eye</p>	<p>Direct eye contact with acid corrosives may produce pain, lachrymation, photophobia and burns.</p> <p>When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation. Irritation of the eyes may produce a heavy secretion of tears (lachrymation).</p> <p>Workers exposed to 200 ppm n-butanol showed ocular symptoms including corneal inflammation, burning sensation, blurring of vision, lachrymation, and photophobia.</p> <p>Isopropanol vapour may cause mild eye irritation at 400 ppm.</p> <p>At concentrations of 100-200 ppm MIBK, the vapour may irritate the eyes and respiratory tract</p>														
<p>Chronic</p>	<p>Repeated or prolonged exposure to acids may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw.</p> <p>On the basis, primarily, of animal experiments, concern has been expressed that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment.</p> <p>Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems.</p> <p>Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.</p> <p>Exposure to the material may cause concerns for human fertility, generally on the basis that results in animal studies provide sufficient evidence to cause a strong suspicion 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 are not a secondary non-specific consequence of other toxic effects.</p> <p>Long term or repeated ingestion exposure of isopropanol may produce incoordination, lethargy and reduced weight gain.</p> <p>Experiments with rats exposed to MIBK have shown nerve changes characteristic of neuropathy (disease of the peripheral nerves usually causing weakness and numbness).</p>														
<p>RESENE 81B ETCH PRIMER CATALYST</p>	<table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Not Available</td> <td>Not Available</td> </tr> </tbody> </table>	TOXICITY	IRRITATION	Not Available	Not Available										
TOXICITY	IRRITATION														
Not Available	Not Available														
<p>phosphoric acid</p>	<table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Dermal (rabbit) LD50: >1260 mg/kg^[2]</td> <td>Eye (rabbit): 119 mg - SEVERE</td> </tr> <tr> <td>Inhalation (rat) LC50: 0.0255 mg/l/4h^[2]</td> <td>Eye: adverse effect observed (irritating)^[1]</td> </tr> <tr> <td>Oral (rat) LD50: 1250 mg/kg^[2]</td> <td>Skin (rabbit):595 mg/24h - SEVERE</td> </tr> <tr> <td></td> <td>Skin: adverse effect observed (corrosive)^[1]</td> </tr> </tbody> </table>	TOXICITY	IRRITATION	Dermal (rabbit) LD50: >1260 mg/kg ^[2]	Eye (rabbit): 119 mg - SEVERE	Inhalation (rat) LC50: 0.0255 mg/l/4h ^[2]	Eye: adverse effect observed (irritating) ^[1]	Oral (rat) LD50: 1250 mg/kg ^[2]	Skin (rabbit):595 mg/24h - SEVERE		Skin: adverse effect observed (corrosive) ^[1]				
TOXICITY	IRRITATION														
Dermal (rabbit) LD50: >1260 mg/kg ^[2]	Eye (rabbit): 119 mg - SEVERE														
Inhalation (rat) LC50: 0.0255 mg/l/4h ^[2]	Eye: adverse effect observed (irritating) ^[1]														
Oral (rat) LD50: 1250 mg/kg ^[2]	Skin (rabbit):595 mg/24h - SEVERE														
	Skin: adverse effect observed (corrosive) ^[1]														
<p>isopropanol</p>	<table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>dermal (rat) LD50: =12800 mg/kg^[2]</td> <td>Eye (rabbit): 10 mg - moderate</td> </tr> <tr> <td>Inhalation (rat) LC50: 72.6 mg/l/4h^[2]</td> <td>Eye (rabbit): 100 mg - SEVERE</td> </tr> <tr> <td>Oral (rat) LD50: =4396 mg/kg^[2]</td> <td>Eye (rabbit): 100mg/24hr-moderate</td> </tr> <tr> <td></td> <td>Skin (rabbit): 500 mg - mild</td> </tr> </tbody> </table>	TOXICITY	IRRITATION	dermal (rat) LD50: =12800 mg/kg ^[2]	Eye (rabbit): 10 mg - moderate	Inhalation (rat) LC50: 72.6 mg/l/4h ^[2]	Eye (rabbit): 100 mg - SEVERE	Oral (rat) LD50: =4396 mg/kg ^[2]	Eye (rabbit): 100mg/24hr-moderate		Skin (rabbit): 500 mg - mild				
TOXICITY	IRRITATION														
dermal (rat) LD50: =12800 mg/kg ^[2]	Eye (rabbit): 10 mg - moderate														
Inhalation (rat) LC50: 72.6 mg/l/4h ^[2]	Eye (rabbit): 100 mg - SEVERE														
Oral (rat) LD50: =4396 mg/kg ^[2]	Eye (rabbit): 100mg/24hr-moderate														
	Skin (rabbit): 500 mg - mild														
<p>n-butanol</p>	<table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Dermal (rabbit) LD50: 3400 mg/kg^[2]</td> <td>Eye (human): 50 ppm - irritant</td> </tr> <tr> <td>Inhalation (rat) LC50: 24 mg/l/4h^[2]</td> <td>Eye (rabbit): 1.6 mg-SEVERE</td> </tr> <tr> <td>Oral (rat) LD50: 790 mg/kg^[2]</td> <td>Eye (rabbit): 24 mg/24h-SEVERE</td> </tr> <tr> <td></td> <td>Eye: adverse effect observed (irreversible damage)^[1]</td> </tr> <tr> <td></td> <td>Skin (rabbit): 405 mg/24h-moderate</td> </tr> <tr> <td></td> <td>Skin: adverse effect observed (irritating)^[1]</td> </tr> </tbody> </table>	TOXICITY	IRRITATION	Dermal (rabbit) LD50: 3400 mg/kg ^[2]	Eye (human): 50 ppm - irritant	Inhalation (rat) LC50: 24 mg/l/4h ^[2]	Eye (rabbit): 1.6 mg-SEVERE	Oral (rat) LD50: 790 mg/kg ^[2]	Eye (rabbit): 24 mg/24h-SEVERE		Eye: adverse effect observed (irreversible damage) ^[1]		Skin (rabbit): 405 mg/24h-moderate		Skin: adverse effect observed (irritating) ^[1]
TOXICITY	IRRITATION														
Dermal (rabbit) LD50: 3400 mg/kg ^[2]	Eye (human): 50 ppm - irritant														
Inhalation (rat) LC50: 24 mg/l/4h ^[2]	Eye (rabbit): 1.6 mg-SEVERE														
Oral (rat) LD50: 790 mg/kg ^[2]	Eye (rabbit): 24 mg/24h-SEVERE														
	Eye: adverse effect observed (irreversible damage) ^[1]														
	Skin (rabbit): 405 mg/24h-moderate														
	Skin: adverse effect observed (irritating) ^[1]														
<p>methyl isobutyl ketone</p>	<table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Dermal (rabbit) LD50: >16000 mg/kg^[2]</td> <td>Eye (human): 200 ppm/15m</td> </tr> <tr> <td>Oral (rat) LD50: 2080 mg/kg^[2]</td> <td>Eye (rabbit): 40 mg - SEVERE</td> </tr> <tr> <td></td> <td>Eye (rabbit): 500 mg/24h - mild</td> </tr> <tr> <td></td> <td>Skin (rabbit): 500 mg/24h - mild</td> </tr> </tbody> </table>	TOXICITY	IRRITATION	Dermal (rabbit) LD50: >16000 mg/kg ^[2]	Eye (human): 200 ppm/15m	Oral (rat) LD50: 2080 mg/kg ^[2]	Eye (rabbit): 40 mg - SEVERE		Eye (rabbit): 500 mg/24h - mild		Skin (rabbit): 500 mg/24h - mild				
TOXICITY	IRRITATION														
Dermal (rabbit) LD50: >16000 mg/kg ^[2]	Eye (human): 200 ppm/15m														
Oral (rat) LD50: 2080 mg/kg ^[2]	Eye (rabbit): 40 mg - SEVERE														
	Eye (rabbit): 500 mg/24h - mild														
	Skin (rabbit): 500 mg/24h - mild														
<p>acetone</p>	<table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Dermal (rabbit) LD50: =20 mg/kg^[2]</td> <td>Eye (human): 500 ppm - irritant</td> </tr> <tr> <td>Inhalation (rat) LC50: 100.2 mg/l/8hr^[2]</td> <td>Eye (rabbit): 20mg/24hr -moderate</td> </tr> <tr> <td>Oral (rat) LD50: 1800-7300 mg/kg^[2]</td> <td>Eye (rabbit): 3.95 mg - SEVERE</td> </tr> <tr> <td></td> <td>Eye: adverse effect observed (irritating)^[1]</td> </tr> </tbody> </table>	TOXICITY	IRRITATION	Dermal (rabbit) LD50: =20 mg/kg ^[2]	Eye (human): 500 ppm - irritant	Inhalation (rat) LC50: 100.2 mg/l/8hr ^[2]	Eye (rabbit): 20mg/24hr -moderate	Oral (rat) LD50: 1800-7300 mg/kg ^[2]	Eye (rabbit): 3.95 mg - SEVERE		Eye: adverse effect observed (irritating) ^[1]				
TOXICITY	IRRITATION														
Dermal (rabbit) LD50: =20 mg/kg ^[2]	Eye (human): 500 ppm - irritant														
Inhalation (rat) LC50: 100.2 mg/l/8hr ^[2]	Eye (rabbit): 20mg/24hr -moderate														
Oral (rat) LD50: 1800-7300 mg/kg ^[2]	Eye (rabbit): 3.95 mg - SEVERE														
	Eye: adverse effect observed (irritating) ^[1]														

RESENE 81B ETCH PRIMER CATALYST

	Skin (rabbit): 500 mg/24hr - mild
	Skin (rabbit):395mg (open) - 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

PHOSPHORIC ACID	phosphoric acid (85%) No significant acute toxicological data identified in literature search. The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic).
ISOPROPANOL	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.
N-BUTANOL	for n-butanol Acute toxicity: n-Butanol (BA) was only slightly toxic to experimental animals following acute oral, dermal, or inhalation exposure.
METHYL ISOBUTYL KETONE	For methyl isobutyl ketone (MIBK): MIBK is primarily absorbed by the lungs in animals and humans; it can however be absorbed by the gastrointestinal system and through skin. In two cases involving individuals exposed to the vapour MIBK was found in the brain, liver, lung, vitreous fluid, kidney and blood. Experiments in guinea pigs show that MIBK is metabolised to 4-hydroxy-4-methyl-2-pentanone and 4-methyl-2-pentanol. WARNING: This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.
ACETONE	for acetone: The acute toxicity of acetone is low.
RESENE 81B ETCH PRIMER CATALYST & PHOSPHORIC ACID & ISOPROPANOL & N-BUTANOL & METHYL ISOBUTYL KETONE	Asthma-like symptoms may continue for months or even years after exposure to the material ceases.
RESENE 81B ETCH PRIMER CATALYST & PHOSPHORIC ACID	for acid mists, aerosols, vapours Data from assays for genotoxic activity in vitro suggest that eukaryotic cells are susceptible to genetic damage when the pH falls to about 6.5.
RESENE 81B ETCH PRIMER CATALYST & ISOPROPANOL	For isopropanol (IPA): Acute toxicity: Isopropanol has a low order of acute toxicity.
PHOSPHORIC ACID & N-BUTANOL	The material may produce severe irritation to the eye causing pronounced inflammation.
ISOPROPANOL & N-BUTANOL & METHYL ISOBUTYL KETONE & ACETONE	The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic).

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 81B ETCH PRIMER CATALYST	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Available	Not Available	Not Available	Not Available	Not Available

phosphoric acid	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	75.1mg/L	2
	EC50	48	Crustacea	>5.62mg/L	2
	EC50	72	Algae or other aquatic plants	15.29mg/L	2
	EC10	72	Algae or other aquatic plants	37.7mg/L	2
	NOEC	72	Algae or other aquatic plants	3.71mg/L	2

isopropanol	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	9-640mg/L	2
	EC50	48	Crustacea	12500mg/L	5
	EC50	96	Algae or other aquatic plants	993.232mg/L	3
	EC0	24	Crustacea	5-102mg/L	2
	NOEC	5760	Fish	0.02mg/L	4

Continued...

RESENE 81B ETCH PRIMER CATALYST

n-butanol	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	1-376mg/L	2
	EC50	48	Crustacea	1-328mg/L	2
	EC50	96	Algae or other aquatic plants	225mg/L	2
	BCF	24	Fish	921mg/L	4
	EC0	48	Crustacea	1-260mg/L	2
	NOEC	504	Crustacea	4.1mg/L	2

methyl isobutyl ketone	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	69.808mg/L	3
	EC50	48	Crustacea	=170mg/L	1
	EC50	96	Algae or other aquatic plants	275.488mg/L	3
	NOEC	504	Crustacea	30mg/L	2

acetone	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	5-540mg/L	2
	EC50	48	Crustacea	>100mg/L	4
	EC50	96	Algae or other aquatic plants	20.565mg/L	4
	NOEC	240	Crustacea	1-866mg/L	2

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

On the basis of available evidence concerning either toxicity, persistence, potential to accumulate and or observed environmental fate and behaviour, the material may present a danger, immediate or long-term and /or delayed, to the structure and/ or functioning of natural ecosystems.

Harmful to aquatic organisms.

Ecotoxicity:

The tolerance of water organisms towards pH margin and variation is diverse.

for methyl isobutyl ketone (MIBK)

log Kow : 1.19-1.31

Koc : 19-106

Half-life (hr) air : 15-17

Half-life (hr) H2O surface water : 15-33

Henry's atm m3 /mol: 9.40E-05

BOD 5: 0.12-2.14,4.

For isopropanol (IPA):

log Kow : -0.16- 0.28

Half-life (hr) air : 33-84

Half-life (hr) H2O surface water : 130

Henry's atm m3 /mol: 8.07E-06

BOD 5: 1.19,60%

COD : 1.61-2.30,97%

ThOD : 2.4

BOD 20: >70% * [Akzo Nobel]

Environmental Fate

Based on calculated results from a lever 1 fugacity model, IPA is expected to partition primarily to the aquatic compartment (77.7%) with the remainder to the air (22.3%).

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 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
phosphoric acid	HIGH	HIGH
isopropanol	LOW (Half-life = 14 days)	LOW (Half-life = 3 days)
n-butanol	LOW (Half-life = 54 days)	LOW (Half-life = 3.65 days)
methyl isobutyl ketone	HIGH (Half-life = 7001 days)	LOW (Half-life = 1.9 days)
acetone	LOW (Half-life = 14 days)	MEDIUM (Half-life = 116.25 days)

Bioaccumulative potential

RESENE 81B ETCH PRIMER CATALYST

Ingredient	Bioaccumulation
phosphoric acid	LOW (LogKOW = -0.7699)
isopropanol	LOW (LogKOW = 0.05)
n-butanol	LOW (BCF = 0.64)
methyl isobutyl ketone	LOW (LogKOW = 1.31)
acetone	LOW (BCF = 0.69)

Mobility in soil

Ingredient	Mobility
phosphoric acid	HIGH (KOC = 1)
isopropanol	HIGH (KOC = 1.06)
n-butanol	MEDIUM (KOC = 2.443)
methyl isobutyl ketone	LOW (KOC = 10.91)
acetone	HIGH (KOC = 1.981)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

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


Ensure that the hazardous substance is disposed in accordance with the Hazardous Substances (Disposal) Notice 2017

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.

SECTION 14 TRANSPORT INFORMATION

Labels Required

	
Marine Pollutant	NO
HAZCHEM	*3WE

Land transport (UN)

UN number	3469
UN proper shipping name	PAINT, FLAMMABLE, CORROSIVE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE (including paint thinning or reducing compound) (contains phosphoric acid)
Transport hazard class(es)	Class : 3 Subrisk : 8
Packing group	II
Environmental hazard	Not Applicable
Special precautions for user	Special provisions : 163; 367 Limited quantity : 1 L

Air transport (ICAO-IATA / DGR)

UN number	3469
UN proper shipping name	Paint related material, flammable, corrosive (including paint thinning or reducing compound) (contains phosphoric acid)
Transport hazard class(es)	ICAO/IATA Class : 3 ICAO / IATA Subrisk : 8 ERG Code : 3CH
Packing group	II
Environmental hazard	Not Applicable

RESENE 81B ETCH PRIMER CATALYST

Special precautions for user	Special provisions	A3 A72 A192 A803
	Cargo Only Packing Instructions	363
	Cargo Only Maximum Qty / Pack	5 L
	Passenger and Cargo Packing Instructions	352
	Passenger and Cargo Maximum Qty / Pack	1 L
	Passenger and Cargo Limited Quantity Packing Instructions	Y340
	Passenger and Cargo Limited Maximum Qty / Pack	0.5 L

Sea transport (IMDG-Code / GGVSee)

UN number	3469
UN proper shipping name	PAINT, FLAMMABLE, CORROSIVE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE (including paint thinning or reducing compound) (contains phosphoric acid)
Transport hazard class(es)	IMDG Class : 3
	IMDG Subrisk : 8
Packing group	II
Environmental hazard	Not Applicable
Special precautions for user	EMS Number : F-E , S-C
	Special provisions : 163 367
	Limited Quantities : 1 L

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

Not Applicable

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
HSR002663	Surface Coatings and Colourants (Flammable, Corrosive) Group Standard 2017

PHOSPHORIC ACID 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)

ISOPROPANOL 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)

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)

METHYL ISOBUTYL KETONE 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)

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)

Hazardous Substance Location

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

Continued...

RESENE 81B ETCH PRIMER CATALYST

Hazard Class	Quantity beyond which controls apply for closed containers	Quantity beyond which controls apply when use occurring in open containers
3.1B	100 L in containers greater than 5 L 250 L in containers up to and including 5 L	50 L 50 L

Certified Handler

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

Class of substance	Quantities
3.1B	250 L (when in containers greater than 5 L) 500 L (when in containers up to and including 5 L)

Refer Group Standards for further information

Tracking Requirements

Not Applicable

National Inventory Status

National Inventory	Status
Australia - AICS	Yes
Canada - DSL	Yes
Canada - NDSL	No (phosphoric acid; isopropanol; n-butanol; methyl isobutyl ketone; acetone)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - ARIPS	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 and are not exempt from listing (see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION

Revision Date	29/06/2020
Initial Date	29/06/2020

SDS Version Summary

Version	Issue Date	Sections Updated
0.2.1.1.1	29/06/2020	Classification, Fire Fighter (fire/explosion hazard)

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
 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

Powered by AuthorITe, from Chemwatch.