# **RESENE 440 INDUSTRIAL PRIMER**

## **RESENE AUTOMOTIVE & LIGHT INDUSTRIAL**

Version No: 1.2

Safety Data Sheet according to HSNO Regulations

Issue Date: **24/02/2020** Print Date: **24/02/2020** L.GHS.NZL.EN

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

#### **Product Identifier**

Product name	RESENE 440 INDUSTRIAL PRIMER
Synonyms	Incl Industrial Primer, BSE BLK, White, Ultra Deep bases
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 8737, 8530, 9396, 9395

## 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 prefered language then please dial 01

## **SECTION 2 HAZARDS IDENTIFICATION**

# Classification of the substance or mixture

Classification [1]	Chronic Aquatic Hazard Category 2, Specific target organ toxicity - repeated exposure Category 2, Flammable Liquid Category 2, Skin Corrosion/Irritation Category 2, Eye Irritation Category 2, Reproductive Toxicity Category 2, Skin Sensitizer Category 1, Carcinogenicity 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, 6.3A, 6.4A, 6.5B (contact), 6.7B, 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. (Not specified) (Oral, Dermal, Inhalation)
H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H361	Suspected of damaging fertility or the unborn child.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.

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Contaminated work clothing should not be allowed out of the workplace.

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/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.
P273	Avoid release to the environment.

# Precautionary statement(s) Response

P272

P308+P313	IF exposed or concerned: Get medical advice/ attention.
P321	Specific treatment (see advice on this label).
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.
P314	Get medical advice/attention 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].

## 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
25036-25-3	10-20	bisphenol A/ bisphenol A diglycidyl ether polymer
7779-90-0	5-15	zinc phosphate
1330-20-7	10-20	xylene
100-41-4	2-4	<u>ethylbenzene</u>

# **SECTION 4 FIRST AID MEASURES**

# Description of first aid measures

Eye Contact	If this product comes in contact with eyes:  • Wash out immediately with water.  • If irritation continues, 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	<ul> <li>If fumes or combustion products are inhaled remove from contaminated area.</li> <li>Lay patient down. Keep warm and rested.</li> <li>Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>Transport to hospital, or doctor, without delay.</li> </ul>

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- 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.
- - 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

for phosphate salts intoxication:

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.
- Ingestion of large quantities of phosphate salts (over 1.0 grams for an adult) may cause an osmotic catharsis resulting in diarrhoea and probable abdominal cramps. Larger doses such as 4-8 grams will almost certainly cause these effects in everyone. In healthy individuals most of the ingested salt will be excreted in the faeces with the diarrhoea and, thus, not cause any systemic toxicity. Doses greater than 10 grams hypothetically may cause systemic toxicity.
- ▶ Treatment should take into consideration both anionic and cation portion of the molecule.
- All phosphate salts, except calcium salts, have a hypothetical risk of hypocalcaemia, so calcium levels should be monitored.

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.

- For acute or short term repeated exposures to xylene:
- Gastro-intestinal absorption is significant with ingestions. For ingestions exceeding 1-2 ml (xylene)/kg, intubation and lavage with cuffed endotracheal tube is recommended. The use of charcoal and cathartics is equivocal.
- ▶ Pulmonary absorption is rapid with about 60-65% retained at rest.
- ▶ Primary threat to life from ingestion and/or inhalation, is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO2 < 50 mm Hg or pCO2 > 50 mm Hg) should be intubated.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.

**BIOLOGICAL EXPOSURE INDEX - BEI** 

These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

Determinant Index Sampling Time Comments

Methylhippu-ric acids in urine 1.5 gm/gm creatinine End of shift 2 mg/min Last 4 hrs of shift

#### **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 highly flammable.  Combustion products include: carbon dioxide (CO2) aldehydes phosphorus oxides (POx) other pyrolysis products typical of burning organic material.

#### **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.
Major Spills	Chemical Class: aromatic hydrocarbons  For release onto land: recommended sorbents listed in order of priority.  Clear area of personnel and move upwind.

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#### **SECTION 7 HANDLING AND STORAGE**

#### Precautions for safe handling

#### Safe handling

- ▶ Containers, even those that have been emptied, may contain explosive vapours.
- ▶ Electrostatic discharge may be generated during pumping this may result in fire.
- ► Avoid all personal contact, including inhalation.
- ► DO NOT allow clothing wet with material to stay in contact with skin
- Other information
- ▶ Store in original containers in approved flame-proof area.

#### Conditions for safe storage, including any incompatibilities

#### Suitable container

- Packing as supplied by manufacturer.
- ▶ For low viscosity materials (i): Drums and jerry cans must be of the non-removable head type.

#### Xylenes:

- may ignite or explode in contact with strong oxidisers, 1,3-dichloro-5,5-dimethylhydantoin, uranium fluoride
- ▶ attack some plastics, rubber and coatings
- ▶ may generate electrostatic charges on flow or agitation due to low conductivity.
- ▶ Vigorous reactions, sometimes amounting to explosions, can result from the contact between aromatic rings and strong oxidising agents.

#### For alkyl aromatics:

The alkyl side chain of aromatic rings can undergo oxidation by several mechanisms.

- ▶ Avoid reaction with amines, mercaptans, strong acids and oxidising agents
- Phosphates are incompatible with oxidising and reducing agents.
   Segregate from alcohol, water.

# Storage incompatibility

## Glycidyl ethers:

- may form unstable peroxides on storage in air ,light, sunlight, UV light or other ionising radiation, trace metals inhibitor should be maintained at adequate levels
- ▶ may polymerise in contact with heat, organic and inorganic free radical producing initiators
- ▶ may polymerise with evolution of heat in contact with oxidisers, strong acids, bases and amines
- react violently with strong oxidisers, permanganates, peroxides, acyl halides, alkalis, ammonium persulfate, bromine dioxide
- $\ensuremath{\,\boldsymbol{\mathsf{F}}}$  attack some forms of plastics, coatings, and rubber

## **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)	zinc phosphate	Particulates not otherwise classified	10; 3 mg/m3	Not Available	Not Available	(r) - The value for respirable dust.
New Zealand Workplace Exposure Standards (WES)	xylene	Dimethylbenzene (see Xylene)	50 ppm / 217 mg/m3	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	ethylbenzene	Ethyl benzene	100 ppm / 434 mg/m3	543 mg/m3 / 125 ppm	Not Available	Not Available

# EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
bisphenol A/ bisphenol A diglycidyl ether polymer	Epoxy resin; (Bisphenol A-Bisphenol A diglycidyl ether polymer)	6 mg/m3	66 mg/m3	400 mg/m3
zinc phosphate	Zinc phosphate (3:2)	12 mg/m3	36 mg/m3	220 mg/m3
xylene	Xylenes	Not Available	Not Available	Not Available
ethylbenzene	Ethyl benzene	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
bisphenol A/ bisphenol A diglycidyl ether polymer	Not Available	Not Available
zinc phosphate	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		
bisphenol A/ bisphenol A diglycidyl ether polymer	Е	≤ 0.1 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 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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For n-butyl acetate

Odour Threshold Value: 0.0063 ppm (detection), 0.038-12 ppm (recognition)

Exposure at or below the recommended TLV-TWA is thought to prevent significant irritation of the eyes and respiratory passages as well as narcotic effects.

for propylene glycol monomethyl ether (PGME)

Odour Threshold: 10 ppm.

For epichlorohydrin

Odour Threshold Value: 0.08 ppm

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

for propylene glycol monomethyl ether acetate (PGMEA)

Saturated vapour concentration: 4868 ppm at 20 C.

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.

#### **Exposure controls**

•	
Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard.
Personal protection	
Eye and face protection	► Safety glasses with side shields.
Skin protection	See Hand protection below
Hands/feet protection	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.  When handling liquid-grade epoxy resins wear chemically protective gloves, boots and aprons.
Body protection	See Other protection below
Other protection	<ul> <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>

#### Recommended material(s)

#### GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

#### "Forsberg Clothing Performance Index".

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

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Material	СРІ
TEFLON	A
BUTYL	С
BUTYL/NEOPRENE	С
HYPALON	С
NAT+NEOPR+NITRILE	С
NATURAL RUBBER	С
NATURAL+NEOPRENE	С
NEOPRENE	С
NEOPRENE/NATURAL	С
NITRILE	С
NITRILE+PVC	С
PE	С
PE/EVAL/PE	С
PVA	С
PVC	С
PVDC/PE/PVDC	С
VITON	С
VITON/BUTYL	С

<sup>\*</sup> CPI - Chemwatch Performance Index

**NOTE**: As a series of factors will influence the actual performance of the glove, a final

# Respiratory protection

Type A Filter of sufficient capacity.

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

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

#### ^ - Full-face

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

- 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

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

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

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selection must be based on detailed observation. -

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

#### **SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

#### Information on basic physical and chemical properties

Reactive diluents are generally colourless to yellow/ amber, low viscosity liquids with mild ether-like odour; solubility in water varies across the Appearance family.

Note that all of the monopropylene glycol ethers may exist in two isomeric forms, alpha or beta. Coloured liquid with strong solvent odour

Physical state	Liquid	Relative density (Water = 1)	1.45-1.47
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	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	120-135	Molecular weight (g/mol)	Not Available
Flash point (°C)	17-20	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	HIGHLY 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)	44
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	380-390

## **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**

Inhaled

## Information on toxicological effects

Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system, in a substantial number of individuals, following inhalation.

The material has **NOT** been classified by EC Directives or other classification systems as "harmful by inhalation".

Inhalation of vapours may cause drowsiness and dizziness.

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.

The acute toxicity of inhaled alkylbenzenes 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 xvlene overexposure.

Xvlene is a central nervous system depressant.

Following an oral intake of extremely high doses of zinc (where 300 mg Zn/d - 20 times the US Recommended Dietary Allowance (RDA) - is a "low intake" overdose), nausea, vomiting, pain, cramps and diarrhea may occur.

## Reactive diluents exhibit a range of ingestion hazards.

Male rats exposed to a single oral dose of bisphenol A diglycidyl ether (BADGE) at 750, 1000, and 2000 mg/kg/day showed a significantly increase in the number of immature and maturing sperm on the testis. Swallowing of the liquid may cause aspiration of vomit into the lungs with the risk of haemorrhaging, pulmonary oedema, progressing to chemical

Ingestion pneumonitis; serious consequences may result. The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion".

> Phosphates are slowly and incompletely absorbed from the gastrointestinal tract and are unlikely (other than in abuse) to produce the systemic effects which occur when introduced by other routes.

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#### Skin Contact

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.

The material may accentuate any pre-existing dermatitis condition

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.

Bisphenol A diglycidyl ether (BADGE) may produce contact dermatitis characterised by erythema and oedema, with weeping followed by crusting and scaling.

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.

#### Eye

Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

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.

Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems.

Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.

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.

Harmful: danger of serious damage to health by prolonged exposure if swallowed.

Serious damage (clear functional disturbance or morphological change which may have toxicological significance) is likely to be caused by repeated or prolonged exposure.

#### Chronic

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.

Bisphenol A diglycidyl ethers (BADGEs) produce sensitisation dermatitis characterised by a papular, vesicular eczema with considerable itching of the back of the hand, the forearm and face and neck.

For some reactive diluents, prolonged or repeated skin contact may result in absorption of potentially harmful amounts or allergic skin reactions Exposure to some reactive diluents (notably neopentylglycol diglycidyl ether, CAS RN:17557-23-2) has caused cancer in some animal testing. All glycidyl ethers show genotoxic potential due their alkylating properties.

Dogs given daily doses of sodium phosphate dibasic for 9-22 weeks showed calcium deposits in the kidneys (nephrocalcinosis) with disseminated atrophy of the proximal tubule.

Following an oral intake of extremely high doses of zinc (where 300 mg Zn/d – 20 times the US Recommended Dietary Allowance (RDA) – is a "low intake" overdose), nausea, vomiting, pain, cramps and diarrhea may occur.

Prolonged or repeated contact with xylenes may cause defatting dermatitis with drying and cracking.

RESENE 440 INDUSTRIAL	TOXICITY	IRRITATION	
PRIMER	Not Available	Not Available	
	TOXICITY	IRRITATION	
bisphenol A/ bisphenol A diglycidyl ether polymer	dermal (rat) LD50: >2000 mg/kg <sup>[2]</sup>	Not Available	
digiyoldyi etiler polyiller	Oral (rat) LD50: >2000 mg/kg <sup>[2]</sup>		
	TOXICITY	IRRITATION	
zinc phosphate	Oral (rat) LD50: >5000 mg/kg <sup>[2]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup>	
		Skin: no adverse effect observed (not irritating) <sup>[1]</sup>	
	TOXICITY	IRRITATION	
	Dermal (rabbit) LD50: >1700 mg/kg <sup>[2]</sup>	Eye (human): 200 ppm irritant	
	Inhalation (rat) LC50: 4994.295 mg/l/4h <sup>[2]</sup>	Eye (rabbit): 5 mg/24h SEVERE	
xylene	Oral (rat) LD50: 3523-8700 mg/kg <sup>[2]</sup>	Eye (rabbit): 87 mg mild	
		Eye: adverse effect observed (irritating) <sup>[1]</sup>	
		Skin (rabbit):500 mg/24h moderate	
		Skin: adverse effect observed (irritating) <sup>[1]</sup>	
	TOXICITY	IRRITATION	
	Dermal (rabbit) LD50: >5000 mg/kg <sup>[2]</sup>	Eye (rabbit): 500 mg - SEVERE	
ethylbenzene	Inhalation (mouse) LC50: 17.75 mg/l/2H <sup>[2]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup>	
	Oral (rat) LD50: 3500 mg/kg <sup>[2]</sup>	Skin (rabbit): 15 mg/24h mild	
		Skin: no adverse effect observed (not irritating) <sup>[1]</sup>	
Legend:	Nalue 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		

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Bisphenol A diglycidyl ethers (BADGEs) produce sensitisation dermatitis characterised by a papular, vesicular eczema with considerable itching of the back of the hand, the forearm and face and neck.

Bisphenol A exhibits hormone-like properties that raise concern about its suitability in consumer products and food containers. All glycidyl ethers show genotoxic potential due their alkylating properties.

for propylene glycol ethers (PGEs):

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	Typical propylene glycol ethers include propylene glycol n-butyl ether (PnB); dipropylene glycol n-butyl ether (DPnB); dipropylene glycol methyl ether acetate (DPMA); tripropylene glycol methyl ether (TPM).  Testing of a wide variety of propylene glycol ethers Testing of a wide variety of propylene glycol ethers has shown that propylene glycol-based ethers are less toxic than some ethers of the ethylene series.  Oxiranes (including glycidyl ethers and alkyl oxides, and epoxides) exhibit many common characteristics with respect to animal toxicology. for 1,2-butylene oxide (ethyloxirane):  Ethyloxirane increased the incidence of tumours of the respiratory system in male and female rats exposed via inhalation.			
BISPHENOL A/ BISPHENOL A DIGLYCIDYL ETHER POLYMER	*Hexion MSDS Epikote 1001 No significant acute toxicological data identified in literature search.			
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 440 INDUSTRIAL PRIMER & BISPHENOL A/ BISPHENOL A DIGLYCIDYL ETHER POLYMER	Asthma-like symptoms may continue for months or even years after exposure to the material ceases.  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.  In mice, dermal application of bisphenol A diglycidyl ether (BADGE) (1, 10, or 100 mg/kg) for 13 weeks produced mild to moderate chronic active dermatitis.  The chemical structure of hydroxylated diphenylalkanes or bisphenols consists of two phenolic rings joined together through a bridging carbon.			
XYLENE & ETHYLBENZENE	The material may produce severe irritation to the eye causing pronounced inflammation.  The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic).			
Acute Toxicity	×	Carcinogenicity	<b>→</b>	
Skin Irritation/Corrosion	✓	Reproductivity	✓	
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	×	
Respiratory or Skin sensitisation	•	STOT - Repeated Exposure	<b>✓</b>	
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 440 INDUSTRIAL PRIMER	ENDPOINT	TEST DURATION (HR)	SPECIES		VALUE	SOURCE
	Not Available	Not Available	Not Available		Not Available	Not Available
1	ENDPOINT	TEST DURATION (HR)	SPECIES		VALUE	SOURCE
bisphenol A/ bisphenol A diglycidyl ether polymer	Not Available	Not Available	Not Available		Not Available	Not Available
	ENDPOINT	TEST DURATION (HR)	SPECIES	VAL	JE	SOURCE
	LC50	96	Fish	0.00	1-0.58mg/L	2
zinc phosphate	EC50	48	Crustacea	Crustacea 0.001-		2
	NOEC	72	Algae or other aquatic plants	0.000	038608mg/L	2
	ENDPOINT	TEST DURATION (HR)	SPECIES		VALUE	SOURC
	LC50	96	Fish		2.6mg/L	2
xylene	EC50	48	Crustacea		1.8mg/L	2
	EC50	72	Algae or other aquatic plants		3.2mg/L	2
	NOEC	73	Algae or other aquatic plants		0.44mg/L	2
ethylbenzene	ENDPOINT	TEST DURATION (HR)	SPECIES		VALUE	SOURC
	LC50	96	Fish		0.0043mg/L	4
	EC50	48	Crustacea		1.184mg/L	4
	EC50	96	Algae or other aquatic plants		3.6mg/L	4
	NOEC	168	Crustacea		0.96mg/L	5

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

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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.

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

For bisphenol A and related bisphenols:

Environmental fate:

Biodegradability (28 d) 89% - Easily biodegradable

Bioconcentration factor (BCF) 7.8 mg/l

Bisphenol A, its derivatives and analogues, can be released from polymers, resins and certain substances by metabolic products

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII

As an environmental contaminant, bisphenol A interferes with nitrogen fixation at the roots of leguminous plants associated with the bacterial symbiont Sinorhizobium meliloti.

Significant environmental findings are limited.

for 1,2-butylene oxide (ethyloxirane):

Environmental fate: Ethyloxirane is highly soluble in water and has a very low soil-adsorption coefficient, which suggests that if released to water, adsorption of ethyloxirane to sediment and suspended solids is not expected.

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

COD: 2.56,13% ThOD: 3.125 BCF: 23 log BCF: 1.17-2.41 Environmental Fate

BOD 5 if unstated: 1.4.1%

Terrestrial fate:: Measured Koc values of 166 and 182, indicate that 3-xylene is expected to have moderate mobility in soil.

The principal problems of phosphate contamination of the environment relates to eutrophication processes in lakes and ponds.

For zinc and its compounds:

#### **Environmental fate:**

Zinc is capable of forming complexes with a variety of organic and inorganic groups (ligands).

DO NOT discharge into sewer or waterways.

#### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air	
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	
xylene	MEDIUM (BCF = 740)	
ethylbenzene	LOW (BCF = 79.43)	

#### Mobility in soil

Ingredient	Mobility
ethylbenzene	LOW (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.

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



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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)	Class 3 Subrisk Not Applicable	
Packing group	II	
Environmental hazard	Environmentally hazardous	
Special precautions for user	Special provisions 163; 367 Limited quantity 5 L	

# Air transport (ICAO-IATA / DGR)

UN number	1263			
UN proper shipping name	Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base); Paint related material (including paint thinning or reducing compounds)			
Transport hazard class(es)	ICAO/IATA Class ICAO / IATA Subrisk	3 Not Applicable		
D. II.	ERG Code	3L		
Packing group				
Environmental hazard	Environmentally hazardo	ous		
	Special provisions A3 A7		A3 A72 A192	
	Cargo Only Packing Instructions		364	
	Cargo Only Maximum Qty / Pack		60 L	
Special precautions for user	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)

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)	IMDG Class 3 IMDG Subrisk Not Applicable	
Packing group	П	
Environmental hazard	Marine Pollutant	
Special precautions for user	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

# **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, Toxic [6.7]) Group Standard 2017

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Chemical Footprint Project - Chemicals of High Concern List International FOSFA List of Banned Immediate Previous Cargoes

#### ZINC PHOSPHATE IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Air Transport Association (IATA) Dangerous Goods Regulations International Maritime Dangerous Goods Requirements (IMDG Code)

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification

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

#### XYLENE IS FOUND ON THE FOLLOWING REGULATORY LISTS

GESAMP/EHS Composite List - GESAMP Hazard Profiles

IMO IBC Code Chapter 17: Summary of minimum requirements

IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk

IMO Provisional Categorization of Liquid Substances - List 3: (Trade-named) mixtures containing at least 99% by weight of components already assessed by IMO, presenting safety hazards

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

International Air Transport Association (IATA) Dangerous Goods Regulations

#### ETHYLBENZENE IS FOUND ON THE FOLLOWING REGULATORY LISTS

Chemical Footprint Project - Chemicals of High Concern List

GESAMP/EHS Composite List - GESAMP Hazard Profiles

IMO IBC Code Chapter 17: Summary of minimum requirements

IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk

IMO Provisional Categorization of Liquid Substances - List 2: Pollutant only mixtures containing at least 99% by weight of components already assessed by IMO

IMO Provisional Categorization of Liquid Substances - List 3: (Trade-named) mixtures containing at least 99% by weight of components already assessed by IMO, presenting safety hazards

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 Inventory of Chemicals (NZIoC)

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Land Transport Rule: Dangerous Goods 2005 - Schedule 1 Quantity limits

New Zealand Workplace Exposure Standards (WES)

United Nations Recommendations on the Transport of Dangerous Goods Model Regulations

International Maritime Dangerous Goods Requirements (IMDG Code)

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)

United Nations Recommendations on the Transport of Dangerous Goods Model Regulations

International Air Transport Association (IATA) Dangerous Goods Regulations

International Maritime Dangerous Goods Requirements (IMDG Code)

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)

United Nations Recommendations on the Transport of Dangerous Goods Model Regulations

#### **Hazardous Substance Location**

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

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	
National Inventory	Status
Australia - AICS	Yes
Canada - DSL	Yes
Canada - NDSL	No (xylene; ethylbenzene; bisphenol A/ bisphenol A diglycidyl ether polymer)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (bisphenol A/ bisphenol A diglycidyl ether polymer)
Japan - ENCS	No (bisphenol A/ bisphenol A diglycidyl ether polymer)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	No (zinc phosphate; bisphenol A/ bisphenol A diglycidyl ether polymer)
Vietnam - NCI	Yes
Russia - ARIPS	Yes

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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	24/02/2020
Initial Date	25/02/2015

# **SDS Version Summary**

Version	Issue Date	Sections Updated
0.2.1.1.1	24/02/2020	Classification

## 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.

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