

# RESENE ARMOURCOTE 510LT HARDENER

Resene Paints Ltd

Version No: 1.5

Safety Data Sheet according to HSNO Regulations

Chemwatch Hazard Alert Code: 2

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S.GHS.NZL.EN

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

### Product Identifier

|                               |                                  |
|-------------------------------|----------------------------------|
| Product name                  | RESENE ARMOURCOTE 510LT HARDENER |
| Synonyms                      | Not Available                    |
| Other means of identification | Not Available                    |

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

|                          |      |
|--------------------------|------|
| Relevant identified uses | 8786 |
|--------------------------|------|

### Details of the manufacturer/importer

|                         |  |
|-------------------------|--|
| Registered company name | Resene Paints Ltd                                      |
| Address                 | 32-50 Vogel Street Wellington 5011 Naenae New Zealand  |
| Telephone               | +64 4 577 0500   |
| 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) |
| Emergency telephone numbers       | 0800 764766              |
| Other emergency telephone numbers | Not Available            |

## CHEMWATCH EMERGENCY RESPONSE

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

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

## SECTION 2 HAZARDS IDENTIFICATION

### Classification of the substance or mixture

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation. Not regulated for transport of Dangerous Goods.

|   |  |
|---|--|
| GHS Classification <sup>[1]</sup>               | Acute Toxicity (Oral) Category 5, Skin Corrosion/Irritation Category 3, Serious Eye Damage Category 1, Eye Irritation Category 2A, Carcinogen Category 2, Reproductive Toxicity Category 2, STOT - RE Category 2, Acute Aquatic Hazard Category 2, Chronic Aquatic Hazard Category 2 |
| Legend:   | 1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI  |
| Determined by Chemwatch using GHS/HSNO criteria | 9.1B, 6.7B, 6.3B, 6.4A, 6.1E (oral), 8.3A, 6.9B, 6.8B  |

### Label elements

|                    |   |
|--------------------|---|
| GHS label elements |  |
|--------------------|---|

SIGNAL WORD DANGER

Continued...

## RESENE ARMOURCOTE 510LT HARDENER

**Hazard statement(s)**

|      |   |
|------|---|
| H303 | May be harmful if swallowed                                       |
| H316 | Causes mild skin irritation                                       |
| H318 | Causes serious eye damage   |
| H319 | Causes serious eye irritation                                     |
| H351 | Suspected of causing cancer                                       |
| H361 | Suspected of damaging fertility or the unborn child               |
| H373 | May cause damage to organs through prolonged or repeated exposure |
| H401 | Toxic to aquatic life   |
| H411 | Toxic to aquatic life with long lasting effects                   |

**Precautionary statement(s) Prevention**

|      |   |
|------|---|
| P201 | Obtain special instructions before use. |
|------|---|

**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. |
|----------------|--|

**Precautionary statement(s) Storage**

|      |                  |
|------|------------------|
| P405 | Store locked up. |
|------|------------------|

**Precautionary statement(s) Disposal**

|      |  |
|------|--|
| P501 | Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration |
|------|--|

**SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS****Substances**

See section below for composition of Mixtures

**Mixtures**

| CAS No    | %[weight] | Name                               |
|-----------|-----------|------------------------------------|
| 100-51-6  | 10-15     | <a href="#">benzyl alcohol</a>     |
| 1330-20-7 | 5-10      | <a href="#">xylene</a>             |
| 100-41-4  | 1-5       | <a href="#">ethylbenzene</a>       |
| 98-54-4   | 5-10      | <a href="#">p-tert-butylphenol</a> |
| 71-36-3   | 1-5       | <a href="#">n-butanol</a>          |

**SECTION 4 FIRST AID MEASURES**

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

**Description of first aid measures**

|                     |  |
|---------------------|--|
| <b>Eye Contact</b>  | If this product comes in contact with the eyes:<br>▶ Wash out immediately with fresh running water.<br>▶ 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.<br>▶ Seek medical attention without delay; if pain persists or recurs seek medical attention.<br>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.  |
| <b>Skin Contact</b> | If skin or hair contact occurs:<br>▶ Flush skin and hair with running water (and soap if available).<br>▶ Seek medical attention in event of irritation.   |
| <b>Inhalation</b>   | ▶ If fumes or combustion products are inhaled remove from contaminated area.<br>▶ Lay patient down. Keep warm and rested.<br>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.<br>▶ 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.<br>▶ Transport to hospital, or doctor.  |
| <b>Ingestion</b>    | ▶ If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.<br>▶ If swallowed do <b>NOT</b> induce vomiting.<br>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.<br>▶ Observe the patient carefully.<br>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.<br>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.<br>▶ Seek medical advice.<br>▶ Avoid giving milk or oils.<br>▶ Avoid giving alcohol. |

**Indication of any immediate medical attention and special treatment needed**

Continued...

## RESENE ARMOURCOTE 510LT HARDENER

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.

Clinical experience of benzyl alcohol poisoning is generally confined to premature neonates in receipt of preserved intravenous salines.

- ▶ Metabolic acidosis, bradycardia, skin breakdown, hypotonia, hepatorenal failure, hypotension and cardiovascular collapse are characteristic.
- ▶ High urine benzoate and hippuric acid as well as elevated serum benzoic acid levels are found.
- ▶ The so-called "gasping syndrome" describes the progressive neurological deterioration of poisoned neonates.
- ▶ Management is essentially supportive.

For acute or short term repeated exposures to phenols/ cresols:

- ▶ Phenol is absorbed rapidly through lungs and skin. [Massive skin contact may result in collapse and death]\*
- ▶ [Ingestion may result in ulceration of upper respiratory tract; perforation of oesophagus and/or stomach, with attendant complications, may occur. Oesophageal stricture may occur.]\*
- ▶ An initial excitatory phase may present. Convulsions may appear as long as 18 hours after ingestion. Hypotension and ventricular tachycardia that require vasopressor and antiarrhythmic therapy, respectively, can occur.
- ▶ Respiratory arrest, ventricular dysrhythmias, seizures and metabolic acidosis may complicate severe phenol exposures so the initial attention should be directed towards stabilisation of breathing and circulation with ventilation, intubation, intravenous lines, fluids and cardiac monitoring as indicated.
- ▶ [Vegetable oils retard absorption; do NOT use paraffin oils or alcohols. Gastric lavage, with endotracheal intubation, should be repeated until phenol odour is no longer detectable; follow with vegetable oil. A saline cathartic should then be given.]\* ALTERNATIVELY: Activated charcoal (1g/kg) may be given. A cathartic should be given after oral activated charcoal.
- ▶ Severe poisoning may require slow intravenous injection of methylene blue to treat methaemoglobinemia.
- ▶ [Renal failure may require haemodialysis.]\*
- ▶ Most absorbed phenol is biotransformed by the liver to ethereal and glucuronide sulfates and is eliminated almost completely after 24 hours. [Ellenhorn and Barceloux: Medical Toxicology]

\*[Union Carbide]

## BIOLOGICAL EXPOSURE INDEX - BEI

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

| Determinant              | Index                | Sampling Time | Comments |
|--------------------------|----------------------|---------------|----------|
| 1. Total phenol in blood | 250 mg/gm creatinine | End of shift  | B, NS    |

B: Background levels occur in specimens collected from subjects NOT exposed

NS: Non-specific determinant; also seen in exposure to other materials

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 (pO<sub>2</sub> < 50 mm Hg or pCO<sub>2</sub> > 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 |
|-------------------------------|----------------------------------|-------------------------------------|----------|
| Methylhippuric acids in urine | 1.5 gm/gm creatinine<br>2 mg/min | End of shift<br>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 | Combustible.  |

## SECTION 6 ACCIDENTAL RELEASE MEASURES

## Personal precautions, protective equipment and emergency procedures

|              |  |
|--------------|--|
| Minor Spills | Environmental hazard - contain spillage. |
| Major Spills | Environmental hazard - contain spillage. |

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

## SECTION 7 HANDLING AND STORAGE

## Precautions for safe handling

Continued...

## RESENE ARMOURCOTE 510LT HARDENER

|                   |  |
|-------------------|--|
| Safe handling     | ► Electrostatic discharge may be generated during pumping - this may result in fire. |
| Other information | ► Store in original containers.  |

## Conditions for safe storage, including any incompatibilities

|                         |   |
|-------------------------|---|
| Suitable container      | ► Metal can or drum<br>► Packaging as recommended by manufacturer.  |
| Storage incompatibility | <p>Benzyl alcohol:</p> <ul style="list-style-type: none"> <li>► may froth in contact with water</li> <li>► slowly oxidises in air, oxygen forming benzaldehyde</li> <li>► is incompatible with mineral acids, caustics, aliphatic amines, isocyanates</li> <li>► reacts violently with strong oxidisers, and explosively with sulfuric acid at elevated temperatures</li> <li>► corrodes aluminium at high temperatures</li> <li>► is incompatible with aluminum, iron, steel</li> <li>► attacks some nonfluorinated plastics; may attack, extract and dissolve polypropylene</li> </ul> <p>Benzyl alcohol contaminated with 1.4% hydrogen bromide and 1.2% of dissolved iron(II) polymerises exothermically above 100 deg.</p> |

## PACKAGE MATERIAL INCOMPATIBILITIES

Not Available

## 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) | xylene       | Xylene (o-, m-, p-isomers) | 217 mg/m3 / 50 ppm  | Not Available       | Not Available      | Not Available   |
| New Zealand Workplace Exposure Standards (WES) | ethylbenzene | Ethyl benzene              | 434 mg/m3 / 100 ppm | 543 mg/m3 / 125 ppm | Not Available      | Not Available   |
| New Zealand Workplace Exposure Standards (WES) | n-butanol    | n-Butyl alcohol            | Not Available       | Not Available       | 150 mg/m3 / 50 ppm | Skin absorption |

## EMERGENCY LIMITS

| Ingredient         | Material name                                | TEEL-1        | TEEL-2        | TEEL-3        |
|--------------------|--|---------------|---------------|---------------|
| benzyl alcohol     | Benzyl alcohol                               | 30 ppm        | 49 ppm        | 49 ppm        |
| xylene             | Xylenes                                      | Not Available | Not Available | Not Available |
| ethylbenzene       | Ethyl benzene                                | Not Available | Not Available | Not Available |
| p-tert-butylphenol | Tert-butylphenol, p-; (Tert-butylphenol, 4-) | 1.5 mg/m3     | 36 mg/m3      | 220 mg/m3     |
| n-butanol          | Butyl alcohol, n-; (n-Butanol)               | 20 ppm        | 50 ppm        | 8000 ppm      |

| Ingredient         | Original IDLH | Revised IDLH    |
|--------------------|---------------|-----------------|
| benzyl alcohol     | Not Available | Not Available   |
| xylene             | 1,000 ppm     | 900 ppm         |
| ethylbenzene       | 2,000 ppm     | 800 [LEL] ppm   |
| p-tert-butylphenol | Not Available | Not Available   |
| n-butanol          | 8,000 ppm     | 1,400 [LEL] 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 side shields.   |
| Skin protection                  | See Hand protection below   |
| Hands/feet protection            | 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.   |
| Thermal hazards                  | Not Available   |

## Recommended material(s)

## GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:  
"Forsberg Clothing Performance Index".

## Respiratory protection

Type AK-P Filter of sufficient capacity.

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the

Continued...

## RESENE ARMOURCOTE 510LT HARDENER

The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:  
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| Material          | CPI |
|-------------------|-----|
| BUTYL             | C   |
| BUTYL/NEOPRENE    | C   |
| HYPALON           | C   |
| NAT+NEOPR+NITRILE | C   |
| NATURAL RUBBER    | C   |
| NATURAL+NEOPRENE  | C   |
| NEOPRENE          | C   |
| NEOPRENE/NATURAL  | C   |
| NITRILE           | C   |
| NITRILE+PVC       | C   |
| PE                | C   |
| PE/EVAL/PE        | C   |
| PVA               | C   |
| PVC               | C   |
| PVDC/PE/PVDC      | C   |
| TEFLON            | C   |
| VITON             | C   |

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

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

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(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 degC)

\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

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

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

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

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

## Information on basic physical and chemical properties

|  |                |  |               |
|--|----------------|--|---------------|
| Appearance                                   | Viscous liquid |  |               |
| Physical state                               | Liquid         | Relative density (Water = 1)               | 1.38          |
| Odour  | Not Available  | Partition coefficient<br>n-octanol / water | Not Available |
| Odour threshold                              | Not Available  | Auto-ignition temperature<br>(°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) | >140           | Molecular weight (g/mol)                   | Not Available |
| Flash point (°C)                             | >93            | Taste                                      | Not Available |
| Evaporation rate                             | Not Available  | Explosive properties                       | Not Available |
| Flammability                                 | Not Applicable | 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)                  | 15            |
| Vapour pressure (kPa)                        | Not Available  | Gas group                                  | Not Available |
| Solubility in water (g/L)                    | Immiscible     | pH as a solution (1%)                      | Not Available |
| Vapour density (Air = 1)                     | Not Available  | VOC g/L                                    | 128           |

## 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   |

Continued...

## RESENE ARMOURCOTE 510LT HARDENER

## Hazardous decomposition products

See section 5

## SECTION 11 TOXICOLOGICAL INFORMATION

## Information on toxicological effects

|              |   |
|--------------|---|
| Inhaled      | Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful.               |
| Ingestion    | The material is not thought to produce adverse health effects following ingestion (as classified by EC Directives using animal models).         |
| Skin Contact | The liquid may be miscible with fats or oils and may degrease the skin, producing a skin reaction described as non-allergic contact dermatitis. |
| Eye          | This material can cause eye irritation and damage in some persons.  |
| Chronic      | There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment.                    |

|                                     |   |                                    |
|-------------------------------------|---|------------------------------------|
| RESENE ARMOURCOTE<br>510LT HARDENER | TOXICITY  | IRRITATION                         |
|                                     | Not Available   | Not Available                      |
| benzyl alcohol                      | TOXICITY  | IRRITATION                         |
|                                     | dermal (rat) LD50: 1000000 ppm/90M <sup>[2]</sup>   | Eye (rabbit): 0.75 mg open SEVERE  |
|                                     | Inhalation (rat) LC50: >4.178 mg/L/4h <sup>[2]</sup>  | Skin (man): 16 mg/48h-mild         |
| xylene                              | Oral (rat) LD50: 1560 mg/kg <sup>[2]</sup>  | Skin (rabbit):10 mg/24h open-mild  |
|                                     | TOXICITY  | IRRITATION                         |
|                                     | Dermal (rabbit) LD50: >1700 mg/kg <sup>[2]</sup>  | Eye (human): 200 ppm irritant      |
|                                     | Inhalation (rat) LC50: 5000 ppm/4h <sup>[2]</sup>   | Eye (rabbit): 5 mg/24h SEVERE      |
| ethylbenzene                        | Oral (rat) LD50: 4300 mg/kg <sup>[2]</sup>  | Eye (rabbit): 87 mg mild           |
|                                     |   | Skin (rabbit):500 mg/24h moderate  |
|                                     | TOXICITY  | IRRITATION                         |
|                                     | Dermal (rabbit) LD50: ca.15432.6 mg/kg <sup>[1]</sup>   | Eye (rabbit): 500 mg - SEVERE      |
| p-tert-butylphenol                  | Inhalation (mouse) LC50: 35.5 mg/L/2H <sup>[2]</sup>  | Skin (rabbit): 15 mg/24h mild      |
|                                     | Inhalation (rat) LC50: 55 mg/L/2H <sup>[2]</sup>  |                                    |
|                                     | Oral (rat) LD50: 3500 mg/kg <sup>[2]</sup>  |                                    |
|                                     | TOXICITY  | IRRITATION                         |
| n-butanol                           | Dermal (rabbit) LD50: 2288 mg/kgE <sup>[2]</sup>  | Eye (rabbit) 0.05 mg/24h - SEVERE  |
|                                     | Oral (rat) LD50: >2000 mg/kg <sup>[1]</sup>   | Eye (rabbit): 10 mg - SEVERE       |
|                                     |   | Skin (rabbit): 500 mg/4h - mild    |
|                                     | TOXICITY  | IRRITATION                         |
| Legend:                             | Dermal (rabbit) LD50: 3434.4 mg/kg <sup>[1]</sup>   | Eye (human): 50 ppm - irritant     |
|                                     | Inhalation (rat) LC50: 24 mg/L/4H <sup>[2]</sup>  | Eye (rabbit): 1.6 mg-SEVERE        |
|                                     | Inhalation (rat) LC50: 8000 ppm/4hE <sup>[2]</sup>  | Eye (rabbit): 24 mg/24h-SEVERE     |
|                                     | Oral (rat) LD50: 2292.3 mg/kg <sup>[1]</sup>  | Skin (rabbit): 405 mg/24h-moderate |
| RESENE ARMOURCOTE<br>510LT HARDENER | 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's msds. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances |                                    |
| BENZYL ALCOHOL                      | No significant acute toxicological data identified in literature search.  |                                    |
| XYLENE                              | The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.                                |                                    |
| ETHYLBENZENE                        | Reproductive effector in rats   |                                    |
| P-TERT-BUTYLPHENOL                  | Liver changes, utheral tract, effects on fertility, foetotoxicity, specific developmental abnormalities (musculoskeletal system) recorded.  |                                    |
|                                     | These substances are intravenous anaesthetic agents.  |                                    |

Continued...

## RESENE ARMOURCOTE 510LT HARDENER

|                                   |   |                          |   |
|-----------------------------------|---|--------------------------|---|
| N-BUTANOL                         | Asthma-like symptoms may continue for months or even years after exposure to the material ceases. |                          |   |
| XYLENE & ETHYLBENZENE             | The material may produce severe irritation to the eye causing pronounced inflammation.            |                          |   |
| Acute Toxicity                    | ✓   | Carcinogenicity          | ✓ |
| Skin Irritation/Corrosion         | ✓   | Reproductivity           | ✓ |
| Serious Eye Damage/Irritation     | ✓   | STOT - Single Exposure   | ∅ |
| Respiratory or Skin sensitisation | ∅   | STOT - Repeated Exposure | ✓ |
| Mutagenicity                      | ∅   | Aspiration Hazard        | ∅ |

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

## CMR STATUS

|            |           |   |
|------------|-----------|---|
| REPROTOXIN | xylene    | ILO Chemicals in the electronics industry that have toxic effects on reproduction |
| SKIN       | n-butanol | New Zealand Workplace Exposure Standards (WES) - Skin<br>Skin absorption          |

## SECTION 12 ECOLOGICAL INFORMATION

## Toxicity

For Aromatic Substances Series:

Environmental Fate: Large, molecularly complex polycyclic aromatic hydrocarbons, or PAHs, are persistent in the environment longer than smaller PAHs.

## Persistence and degradability

| Ingredient         | Persistence: Water/Soil     | Persistence: Air            |
|--------------------|-----------------------------|-----------------------------|
| benzyl alcohol     | LOW                         | LOW                         |
| xylene             | HIGH (Half-life = 360 days) | LOW (Half-life = 1.83 days) |
| ethylbenzene       | HIGH (Half-life = 228 days) | LOW (Half-life = 3.57 days) |
| p-tert-butylphenol | HIGH                        | HIGH                        |
| n-butanol          | LOW (Half-life = 54 days)   | LOW (Half-life = 3.65 days) |

## Bioaccumulative potential

| Ingredient         | Bioaccumulation    |
|--------------------|--------------------|
| benzyl alcohol     | LOW (LogKOW = 1.1) |
| xylene             | MEDIUM (BCF = 740) |
| ethylbenzene       | LOW (BCF = 79.43)  |
| p-tert-butylphenol | LOW (BCF = 240)    |
| n-butanol          | LOW (BCF = 64)     |

## Mobility in soil

| Ingredient         | Mobility             |
|--------------------|----------------------|
| benzyl alcohol     | LOW (KOC = 15.66)    |
| ethylbenzene       | LOW (KOC = 517.8)    |
| p-tert-butylphenol | LOW (KOC = 1912)     |
| n-butanol          | MEDIUM (KOC = 2.443) |

## SECTION 13 DISPOSAL CONSIDERATIONS

## Waste treatment methods

|                              |  |
|------------------------------|--|
| Product / Packaging disposal | Containers may still present a chemical hazard/ danger when empty.   |
|                              | Ensure that the disposal of material is carried out in accordance with Hazardous Substances (Disposal) Regulations 2001. |

## SECTION 14 TRANSPORT INFORMATION

## Labels Required

|                  |                |
|------------------|----------------|
| Marine Pollutant | NO             |
| HAZCHEM          | Not Applicable |

Continued...

## RESENE ARMOURCOTE 510LT HARDENER

**Land transport (UN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS****Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS****Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS****Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code**

| Source  | Ingredient     | Pollution Category |
|---|----------------|--------------------|
| IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk | benzyl alcohol | Y                  |
| IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk | xylene         | Y                  |
| IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk | ethylbenzene   | Y                  |

**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   |
| HSR002679   | Surface Coatings and Colourants (Toxic [6.7]) Group Standard 2006  |
| <b>benzyl alcohol(100-51-6) is found on the following regulatory lists</b>    | "New Zealand Inventory of Chemicals (NZIoC)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals"  |
| <b>xylene(1330-20-7) is found on the following regulatory lists</b>           | "New Zealand Inventory of Chemicals (NZIoC)", "International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs", "New Zealand Workplace Exposure Standards (WES)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals" |
| <b>ethylbenzene(100-41-4) is found on the following regulatory lists</b>      | "New Zealand Inventory of Chemicals (NZIoC)", "International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs", "New Zealand Workplace Exposure Standards (WES)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals" |
| <b>p-tert-butylphenol(98-54-4) is found on the following regulatory lists</b> | "New Zealand Inventory of Chemicals (NZIoC)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals"  |
| <b>n-butanol(71-36-3) is found on the following regulatory lists</b>          | "New Zealand Inventory of Chemicals (NZIoC)", "New Zealand Workplace Exposure Standards (WES)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals"  |

**Location Test Certificate**

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

| Hazard Class   | Quantity beyond which controls apply for closed containers | Quantity beyond which controls apply when use occurring in open containers |
|----------------|--|--|
| Not Applicable | Not Applicable   | Not Applicable   |

**Approved Handler**

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

| Class of substance | Quantities     |
|--------------------|----------------|
| Not Applicable     | Not Applicable |

| National Inventory            | Status  |
|-------------------------------|---|
| Australia - AICS              | Y   |
| Canada - DSL                  | Y   |
| China - IECSC                 | Y   |
| Europe - EINEC / ELINCS / NLP | Y   |
| Japan - ENCS                  | Y   |
| Korea - KECI                  | Y   |
| New Zealand - NZIoC           | Y   |
| Philippines - PICCS           | Y   |
| USA - TSCA                    | Y   |
| <b>Legend:</b>                | <i>Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets)</i> |

**SECTION 16 OTHER INFORMATION**

Continued...

**RESENE ARMOURCOTE 510LT HARDENER****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.

A list of reference resources used to assist the committee may be found at:

[www.chemwatch.net](http://www.chemwatch.net)

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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