

# EPOXY HARDENER AMPRO AUSTRALIA PTY LTD

Chemwatch: **7966-08** Version No: **2.1** 

Safety Data Sheet according to Work Health and Safety Regulations (Hazardous Chemicals) 2023 and ADG requirements

Chemwatch Hazard Alert Code: 3

Initial Date: 30/06/2025 Revision Date: 30/06/2025 Print Date: 14/07/2025 S.GHS.AUS.EN.E

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

Product Identifier	
Product name	EPOXY HARDENER
Chemical Name	Not Applicable
Synonyms	NT-8541C Hardener / GP-AI-202 HARDENER
Proper shipping name	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)
Chemical formula	Not Applicable
Other means of identification	Not Available

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

### Details of the manufacturer or importer of the safety data sheet

Registered company name	AMPRO AUSTRALIA PTY LTD
Address	68-70 Western Ave Westmeadows VIC 3049 Australia
Telephone	0419488687
Fax	Not Available
Website	www.germatech.com.au
Email	support@amproaustralia.com

### Emergency telephone number

Association / Organisation	AMPRO AUSTRALIA PTY LTD	CHEMWATCH EMERGENCY RESPONSE (24/7)
Emergency telephone number(s)	0419488687	+61 1800 951 288 (ID#: 7966-08)
Other emergency telephone number(s)	Not Available	+61 3 9573 3188

### **SECTION 2 Hazards identification**

### Classification of the substance or mixture

Poisons Schedule	Not Applicable	
Classification <sup>[1]</sup>	Flammable Liquids Category 3, Aspiration Hazard Category 1, Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 1, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3, Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3, Hazardous to the Aquatic Environment Acute Hazard Category 3, Hazardous to the Aquatic Environment Long-Term Hazard Category 2	
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI	

#### Label elements

Hazard pictogram(s)











Signal word

Dange

Hazard statement(s)

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H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H402	Harmful to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

### Precautionary statement(s) Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P271	Use only a well-ventilated area.
P280	Wear protective gloves, protective clothing, eye protection and face protection.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing mist/vapours/spray.
P273	Avoid release to the environment.
P264	Wash all exposed external body areas thoroughly after handling.

#### Precautionary statement(s) Response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider.
P331	Do NOT induce vomiting.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370+P378	In case of fire: Use alcohol resistant foam or normal protein foam to extinguish.
P391	Collect spillage.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.

### 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
Not Available	45-55	Aromatic Polyamine Hardener
1330-20-7	15-25	<u>xylene</u>
108-67-8	15-25	1,3,5-trimethyl benzene
71-36-3	5-10	n-butanol
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L * EU IOELVs available	

#### **SECTION 4 First aid measures**

### Description of first aid measures

If this product comes in contact with the eyes:

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 until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- ► Transport to hospital or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

### Skin Contact

**Eye Contact** 

If skin or hair contact occurs

- 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. Continue flushing with water until advised to stop by the Poisons Information Centre.

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	▶ Transport to hospital, or doctor.
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>
Ingestion	<ul> <li>If swallowed do NOT induce vomiting.</li> <li>If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>Observe the patient carefully.</li> <li>Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>Seek medical advice.</li> <li>Avoid giving milk or oils.</li> <li>Avoid giving alcohol.</li> <li>If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.</li> </ul>

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

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
- Dry chemical powder.
- ► BCF (where regulations permit).
- Carbon dioxide
- Water spray or fog Large fires only.

### 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 Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water course. If safe, switch off electrical equipment until vapour fire hazard removed Fire Fighting Use water delivered as a fine spray to control fire and cool adjacent area. Avoid spraying water onto liquid pools. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire. Liquid and vapour are flammable. Moderate fire hazard when exposed to heat or flame. Vapour forms an explosive mixture with air Moderate explosion hazard when exposed to heat or flame. Vapour may travel a considerable distance to source of ignition. Fire/Explosion Hazard Heating may cause expansion or decomposition leading to violent rupture of containers. On combustion, may emit toxic fumes of carbon monoxide (CO). Combustion products include: carbon dioxide (CO2) other pyrolysis products typical of burning organic material.

### **SECTION 6 Accidental release measures**

**HAZCHEM** 

### Personal precautions, protective equipment and emergency procedures

●3Y; ●3YE

carbon monoxide (CO)

See section 8

#### **Environmental precautions**

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See section 12

### Methods and material for containment and cleaning up

methods and material for containment and cleaning up		
Minor Spills	<ul> <li>Remove all ignition sources.</li> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> <li>Control personal contact with the substance, by using protective equipment.</li> <li>Contain and absorb small quantities with vermiculite or other absorbent material.</li> <li>Wipe up.</li> <li>Collect residues in a flammable waste container.</li> </ul>	
Major Spills	<ul> <li>Clear area of personnel and move upwind.</li> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>May be violently or explosively reactive.</li> <li>Wear breathing apparatus plus protective gloves.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> <li>Consider evacuation (or protect in place).</li> <li>No smoking, naked lights or ignition sources.</li> <li>Increase ventilation.</li> <li>Stop leak if safe to do so.</li> <li>Water spray or fog may be used to disperse /absorb vapour.</li> <li>Contain spill with sand, earth or vermiculite.</li> <li>Use only spark-free shovels and explosion proof equipment.</li> <li>Collect recoverable product into labelled containers for recycling.</li> <li>Absorb remaining product with sand, earth or vermiculite.</li> <li>Collect solid residues and seal in labelled drums for disposal.</li> <li>Wash area and prevent runoff into drains.</li> <li>If contamination of drains or waterways occurs, advise emergency services.</li> </ul>	

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

### **SECTION 7 Handling and storage**

Precautions for safe handling	
Safe handling	<ul> <li>Containers, even those that have been emptied, may contain explosive vapours.</li> <li>Do NOT cut, drill, grind, weld or perform similar operations on or near containers.</li> <li>DO NOT allow clothing wet with material to stay in contact with skin</li> <li>Avoid all personal contact, including inhalation.</li> <li>Wear protective clothing when risk of overexposure occurs.</li> <li>Use in a well-ventilated area.</li> <li>Prevent concentration in hollows and sumps.</li> <li>DO NOT enter confined spaces until atmosphere has been checked.</li> <li>Avoid smoking, naked lights or ignition sources.</li> <li>Avoid generation of static electricity.</li> <li>DO NOT use plastic buckets.</li> <li>Earth all lines and equipment.</li> <li>Use spark-free tools when handling.</li> <li>Avoid contact with incompatible materials.</li> <li>When handling, DO NOT eat, drink or smoke.</li> <li>Keep containers securely sealed when not in use.</li> <li>Avoid physical damage to containers.</li> <li>Always wash hands with soap and water after handling.</li> <li>Work clothes should be laundered separately.</li> <li>Use good occupational work practice.</li> <li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.</li> </ul>
Other information	<ul> <li>Store in original containers in approved flammable liquid storage area.</li> <li>Store away from incompatible materials in a cool, dry, well-ventilated area.</li> <li>DO NOT store in pits, depressions, basements or areas where vapours may be trapped.</li> <li>No smoking, naked lights, heat or ignition sources.</li> <li>Storage areas should be clearly identified, well illuminated, clear of obstruction and accessible only to trained and authorised personnel - adequate security must be provided so that unauthorised personnel do not have access.</li> <li>Store according to applicable regulations for flammable materials for storage tanks, containers, piping, buildings, rooms, cabinets, allowable quantities and minimum storage distances.</li> <li>Use non-sparking ventilation systems, approved explosion proof equipment and intrinsically safe electrical systems.</li> <li>Have appropriate extinguishing capability in storage area (e.g. portable fire extinguishers - dry chemical, foam or carbon dioxide) and flammable gas detectors.</li> <li>Keep adsorbents for leaks and spills readily available.</li> <li>Protect containers against physical damage and check regularly for leaks.</li> <li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>In addition, for tank storages (where appropriate):</li> <li>Store in grounded, properly designed and approved vessels and away from incompatible materials.</li> <li>For bulk storages, consider use of floating roof or nitrogen blanketed vessels; where venting to atmosphere is possible, equip storage tank vents with flame arrestors; inspect tank vents during winter conditions for vapour/ ice build-up.</li> <li>Storage tanks should be above ground and diked to hold entire contents.</li> </ul>

### Conditions for safe storage, including any incompatibilities

### Suitable container

- ▶ Packing as supplied by manufacturer.
- Plastic containers may only be used if approved for flammable liquid.
- Check that containers are clearly labelled and free from leaks.
- For low viscosity materials (i): Drums and jerry cans must be of the non-removable head type. (ii): Where a can is to be used as an inner package, the can must have a screwed enclosure.

  For materials with a viscosity of at least 2680 cSt. (23 deg. C)
- ► For manufactured product having a viscosity of at least 250 cSt. (23 deg. C)
- Manufactured product that requires stirring before use and having a viscosity of at least 20 cSt (25 deg. C): (i) Removable head
- packaging; (ii) Cans with friction closures and (iii) low pressure tubes and cartridges may be used.

   Where combination packages are used, and the inner packages are of glass, there must be sufficient inert cushioning material in contact with inner and outer packages

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In addition, where inner packagings are glass and contain liquids of packing group I there must be sufficient inert absorbent to absorb any spillage, unless the outer packaging is a close fitting moulded plastic box and the substances are not incompatible with the plastic.

#### **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.
- Aromatics can react exothermically with bases and with diazo compounds.

#### For alkyl aromatics:

The alkyl side chain of aromatic rings can undergo oxidation by several mechanisms. The most common and dominant one is the attack by oxidation at benzylic carbon as the intermediate formed is stabilised by resonance structure of the ring.

- Following reaction with oxygen and under the influence of sunlight, a hydroperoxide at the alpha-position to the aromatic ring, is the primary oxidation product formed (provided a hydrogen atom is initially available at this position) - this product is often short-lived but may be stable dependent on the nature of the aromatic substitution; a secondary C-H bond is more easily attacked than a primary C-H bond whilst a tertiary C-H bond is even more susceptible to attack by oxygen
- Monoalkylbenzenes may subsequently form monocarboxylic acids; alkyl naphthalenes mainly produce the corresponding naphthalene carboxylic acids
- Oxidation in the presence of transition metal salts not only accelerates but also selectively decomposes the hydroperoxides
- Hock-rearrangement by the influence of strong acids converts the hydroperoxides to hemiacetals. Peresters formed from the hydroperoxides undergo Criegee rearrangement easily.
- Alkali metals accelerate the oxidation while CO2 as co-oxidant enhances the selectivity.
- Microwave conditions give improved yields of the oxidation products.
- Photo-oxidation products may occur following reaction with hydroxyl radicals and NOx these may be components of photochemical

Oxidation of Alkylaromatics: T.S.S Rao and Shubhra Awasthi: E-Journal of Chemistry Vol 4, No. 1, pp 1-13 January 2007

### SECTION 8 Exposure controls / personal protection

#### **Control parameters**

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#### Occupational Exposure Limits (OEL)

Storage incompatibility

#### INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	xylene	Xylene (o-, m-, p- isomers)	80 ppm / 350 mg/m3	655 mg/m3 / 150 ppm	Not Available	Not Available
Australia Exposure Standards	n-butanol	n-Butyl alcohol	Not Available	Not Available	50 ppm / 152 mg/m3	Not Available

Ingredient	Original IDLH	Revised IDLH
xylene	900 ppm	Not Available
1,3,5-trimethyl benzene	Not Available	Not Available
n-butanol	1,400 ppm	Not Available

### **Exposure controls**

#### Appropriate engineering controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Employers may need to use multiple types of controls to prevent employee overexposure.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.

For flammable liquids and flammable gases, local exhaust ventilation or a process enclosure ventilation system may be required. Ventilation equipment should be explosion-resistant.

Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min.)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

· Adequate ventilation is typically taken to be that which limits the average concentration to no more than 25% of the LEL within the building, room or enclosure containing the dangerous substance.

· Ventilation for plant and machinery is normally considered adequate if it limits the average concentration of any dangerous substance that might potentially be present to no more than 25% of the LEL. However, an increase up to a maximum 50% LEL can be acceptable where

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additional safequards are provided to prevent the formation of a hazardous explosive atmosphere. For example, gas detectors linked to emergency shutdown of the process might be used together with maintaining or increasing the exhaust ventilation on solvent evaporating ovens and gas turbine enclosures.

Temporary exhaust ventilation systems may be provided for non-routine higher-risk activities, such as cleaning, repair or maintenance in tanks or other confined spaces or in an emergency after a release. The work procedures for such activities should be carefully considered.. The atmosphere should be continuously monitored to ensure that ventilation is adequate and the area remains safe. Where workers will enter the space, the ventilation should ensure that the concentration of the dangerous substance does not exceed 10% of the LEL (irrespective of the provision of suitable breathing apparatus)

#### Individual protection measures, such as personal protective equipment













### Eve and face protection

Safety glasses with side shields

- Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]
- · Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. ICDC NIOSH Current Intelligence Bulletin 59].

#### Skin protection

See Hand protection below

- ▶ Wear chemical protective gloves, e.g. PVC.
- ▶ Wear safety footwear or safety gumboots, e.g. Rubber

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. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:

- · frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).

- · When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.

### Hands/feet protection

- Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use
- · Contaminated gloves should be replaced.

As defined in ASTM F-739-96 in any application, gloves are rated as:

- · Excellent when breakthrough time > 480 min
- Good when breakthrough time > 20 min
- · Fair when breakthrough time < 20 min · Poor when glove material degrades

For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended.

It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.

Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

- Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of
- · Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended

#### **Body protection**

### See Other protection below

- Overalls
- ▶ PVC Apron.
- ▶ PVC protective suit may be required if exposure severe.
- Ensure there is ready access to a safety shower

### Other protection

- ▶ Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static
- For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets).
- Non sparking safety or conductive footwear should be considered. Conductive footwear describes a boot or shoe with a sole made from a conductive compound chemically bound to the bottom components, for permanent control to electrically ground the foot an shall dissipate static electricity from the body to reduce the possibility of ignition of volatile compounds. Electrical resistance must range between 0 to 500,000 ohms. Conductive shoes should be stored in lockers close to the room in which they are worn. Personnel who have been issued conductive footwear should not wear them from their place of work to their homes and return.

### 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 computergenerated selection:

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Material	СРІ
PE/EVAL/PE	Α

### Respiratory protection

Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

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

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up to 10 x ES	A-AUS / Class 1	-	A-PAPR-AUS / Class 1
up to 50 x ES	Air-line*	-	-
up to 100 x ES	-	A-3	-
100+ x ES	-	Air-line**	-

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

PVA	A
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
PVC	С
PVDC/PE/PVDC	С
VITON	С

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

A: Best Selection

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- 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.

#### Ansell Glove Selection

Glove — In order of recommendation
AlphaTec® 38-612
AlphaTec® 15-554
AlphaTec® 58-530B
AlphaTec® 58-530W
AlphaTec® Solvex® 37-185
AlphaTec® 58-008
AlphaTec® Solvex® 37-675
AlphaTec® 58-735
AlphaTec® 79-700
AlphaTec® 53-001

The suggested gloves for use should be confirmed with the glove supplier.

### **SECTION 9 Physical and chemical properties**

#### Information on basic physical and chemical properties **Appearance** Transparent flammable liquid; does not mix with water Relative density (Water = 1) Physical state Liquid 0.91 Partition coefficient n-octanol Odour Not Available Not Available / water **Auto-ignition temperature** Odour threshold Not Available Not Available (°C) Decomposition pH (as supplied) Not Applicable Not Available temperature (°C) Melting point / freezing point Not Available Viscosity (cSt) 30-80 Initial boiling point and Molecular weight (g/mol) 105-266 Not Applicable boiling range (°C) Flash point (°C) Taste Not Available **Evaporation rate** Not Available **Explosive properties** Not Available Flammability Flammable Oxidising properties Not Available Surface Tension (dyn/cm or Upper Explosive Limit (%) Not Available Not Available mN/m) Lower Explosive Limit (%) Volatile Component (%vol) Not Available Not Available Vapour pressure (kPa) Not Available Gas group Not Available Solubility in water Immiscible pH as a solution (1%) Not Applicable Vapour density (Air = 1) Not Available VOC a/L Heat of Combustion (kJ/g) Not Available Ignition Distance (cm) Not Available

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Flame Height (cm)	Not Available	Flame Duration (s)	Not Available
Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	Enclosed Space Ignition Deflagration Density (g/m3)	Not Available

### **SECTION 10 Stability and reactivity**

Reactivity	See section 7
Chemical stability	<ul> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul>
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

_	
a) Acute Toxicity	Based on available data, the classification criteria are not met.
b) Skin Irritation/Corrosion	There is sufficient evidence to classify this material as skin corrosive or irritating.
c) Serious Eye Damage/Irritation	There is sufficient evidence to classify this material as eye damaging or irritating
d) Respiratory or Skin sensitisation	Based on available data, the classification criteria are not met.
e) Mutagenicity	Based on available data, the classification criteria are not met.
f) Carcinogenicity	Based on available data, the classification criteria are not met.
g) Reproductivity	Based on available data, the classification criteria are not met.
h) STOT - Single Exposure	There is sufficient evidence to classify this material as toxic to specific organs through single exposure
i) STOT - Repeated Exposure	Based on available data, the classification criteria are not met.
j) Aspiration Hazard	There is sufficient evidence to classify this material as an aspiration hazard
Inhaled	There is strong evidence to suggest that this material can cause, if inhaled once, very serious, irreversible damage of organs.  The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.  Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo.  Exposure to n-butanol causes dose dependent irritation and headaches in humans, but CNS depression and prostration in mice. Though the offensive odour may forewarn, the smell sense may become fatigued.  Inhalation hazard is increased at higher temperatures.
Ingestion	Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.  There is strong evidence to suggest that this material can cause, if swallowed once, very serious, irreversible damage of organs.
Skin Contact	There is strong evidence to suggest that this material, on a single contact with skin, can cause very serious, irreversible damage of organs. The material may cause moderate inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering.  Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.  Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye	If applied to the eyes, this material causes severe eye damage.  N-butanol can cause eye damage, burning sensation, blurring of vision, excessive tear formation and discomfort to bright light.  The liquid produces a high level of eye discomfort and is capable of causing pain and severe conjunctivitis. Corneal injury may develop, with possible permanent impairment of vision, if not promptly and adequately treated.
Chronic	Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects.  Ample evidence exists from experimentation that reduced human fertility is directly caused by exposure to the material.  Ample evidence exists, from results in experimentation, that developmental disorders are directly caused by human exposure to the material
	TOXICITY IRRITATION

EDOWY HARDENED	TOXICITY	IRRITATION	
EPOXY HARDENER	Not Available	Not Available	
	TOXICITY	IRRITATION	
	Dermal (rabbit) LD50: >1700 mg/kg <sup>[2]</sup>	Eye (Human): 200ppm	
	Inhalation (Rat) LC50: 5000 ppm4h <sup>[2]</sup>	Eye (Rodent - rabbit): 5mg/24H - Severe	
	Oral (Mouse) LD50; 2119 mg/kg <sup>[2]</sup>	Eye (Rodent - rabbit): 87mg - Mild	
xylene		Eye: adverse effect observed (irritating) <sup>[1]</sup>	
		Skin (Rodent - rabbit): 100% - Moderate	
		Skin (Rodent - rabbit): 500mg/24H - Moderate	
		Skin (Rodent - rat): 60uL/8H - Mild	
		Skin: adverse effect observed (irritating) <sup>[1]</sup>	

TOXICITY

dermal (rat) LD50: >3460 mg/kg<sup>[1]</sup>

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IRRITATION

Eye (Rodent - rabbit): 500mg/24H - Mild

1,3,5-trimethyl benzene	Inhalation (Rat) LC50: 24 mg/L4h <sup>[2]</sup>	Eye: adverse e	ffect observed (irritating) <sup>[1]</sup>
	Oral (Rat) LD50: 6000 mg/kg <sup>[1]</sup>	Skin (Rodent -	rabbit): 20mg/24H - Moderate
		Skin: adverse e	effect observed (irritating) <sup>[1]</sup>
	TOXICITY	IRRITATION	
	Dermal (rabbit) LD50: 3400 mg/kg <sup>[2]</sup>	Eye (Human): 5	50ppm
	Inhalation (Rat) LC50: 8000 ppm4h <sup>[2]</sup>	Eye (Human): 9	990ppm/1H
	<u>`</u>	, , , , ,	
	Oral (Rat) LD50: 790 mg/kg <sup>[2]</sup>		abbit): 0.005mL - Severe
n-butanol		Eye (Rodent - r	· · · · · · · · · · · · · · · · · · ·
II-butanoi			abbit): 1.62mg - Severe
			abbit): 2mg/24H - Severe
			ffect observed (irreversible damage) <sup>[1]</sup>
		Skin (Human):	
	Skin (Rodent - rabbit): 20mg/24H - Moderate		
		Skin: adverse e	ffect observed (irritating) <sup>[1]</sup>
Legend:	Value obtained from Europe ECHA Registered Substances - Acute specified data extracted from RTECS - Register of Toxic Effect of che		btained from manufacturer's SDS. Unless otherwise
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.		
1,3,5-TRIMETHYL BENZENE	Other Toxicity data is available for CHEMWATCH 12171 1,2,4-trimethylbenzene CHEMWATCH 12172 1,2,3-trimethylbenzene For trimethylbenzenes: Absorption of 1,2,4-trimethylbenzene occurs after exposure by swallowing, inhalation, or skin contact. In the workplace, inhalation and skin contact are the most important routes of absorption; whole-body toxic effects from skin absorption are unlikely to occur as the skin irritation caused by the chemical generally leads to quick removal. The substance is fat-soluble and may accumulate in fatty tissues. It is also bound to red blood cells in the bloodstream. It is excreted from the body both by exhalation and in the urine.  Acute toxicity: Direct contact with liquid 1,2,4-trimethylbenzene is irritating to the skin, and breathing the vapour is irritating to the airway, causing lung inflammation. Breathing high concentrations of the chemical vapour causes headache, fatigue and drowsiness. In humans, liquid 1,2,4-trimethylbenzene is irritating to the skin and inhalation of the vapour causes chemical pneumonitis. Direct skin contact causes dilation of blood vessels, redness and irritation.  Nervous system toxicity: 1,2,4-trimethylbenzene depresses the central nervous system. Exposure to solvent mixtures in the workplace containing the chemical causes headache, fatigue, nervousness and drowsiness.  Subacute/chronic toxicity: Long-term exposure to solvents containing 1,2,4-trimethylbenzene may cause nervousness, tension and inflammation of the bronchi. Painters that worked for several years with a solvent containing 50% 1,2,4-trimethylbenzene and 30% 1,3,5-trimethylbenzene showed nervousness, tension and anxiety, asthmatic bronchitis, anaemia and changes in blood clotting; blood effects may have been due to trace amounts of benzene. Animal testing showed that inhaling trimethylbenzene may alter blood counts, with reduction in lymphocytes and an increase in neutrophils.  Genetic toxicity: Animal testing does not show that the C9 fraction causes mutations or chromosomal aberrations.		
N-BUTANOL	For n-butanol: Acute toxicity: In animal testing, n-butanol (BA) was only slightly toxic, following exposure by swallowing, skin contact or irritation. Animal testing and human experience suggest that n-butanol is moderately irritating to the skin but severely irritating to the eye. Human studies show that BA is not likely to cause skin sensitization. Warning of exposure occurs before irritation of the nose, because n-butanol has an odour which can be detected below concentration levels cause irritation.  Repeat dose toxicity: Animal testing showed temporarily reduction in activity and food intake following repeated exposure to BA, but otherwise there was no evidence of chronic toxicity.  Reproductive toxicity: Several animal studies indicate BA does not possess reproductive toxicity, and does not affect fertility.  Developmental toxicity: BA only caused developmental changes and toxic effects on the foetus near or at levels that were toxic to the mother.  Genetic toxicity: Testing shows that BA does not possess genetic toxicity.  Cancer-causing potential: Based on negative results from testing for potential of n-butanol to cause mutations and chromosomal aberrations, BA has a very small potential for causing cancer.		
XYLENE & N-BUTANOL	The material may produce severe irritation to the eye causing pronour	nced inflammation.	Repeated or prolonged exposure to irritants may
XYLENE & 1,3,5-TRIMETHYL BENZENE & N-BUTANOL	produce conjunctivitis.  The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the		
DEINELINE & IN-DUTAINUL	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely		
1,3,5-TRIMETHYL BENZENE & N-BUTANOL	Asthma-like symptoms may continue for months or even years after e condition known as reactive airways dysfunction syndrome (RADS) w compound. Main criteria for diagnosing RADS include the absence of of persistent asthma-like symptoms within minutes to hours of a docur include a reversible airflow pattern on lung function tests, moderate to and the lack of minimal lymphocytic inflammation, without eosinophilic disorder with rates related to the concentration of and duration of experience.	exposure to the many thich can occur after previous airways of mented exposure to severe bronchial la. RADS (or asthmosure to the irritating significant of the irritating significant of the severe bronchial lations of irritating significant of the severe bronchial lations of irritating significant of the severe bronchial lations of irritating significant or severe bronchial lations of irritating significant or severe bronchial lations of irritating significant or severe bronchial lations of irritating significant lations of irritating significa	terial ends. This may be due to a non-allergic er exposure to high levels of highly irritating disease in a non-atopic individual, with sudden onset of the irritant. Other criteria for diagnosis of RADS hyperreactivity on methacholine challenge testing, a) following an irritating inhalation is an infrequent ing substance. On the other hand, industrial bronchitis substance (often particles) and is completely
1,3,5-TRIMETHYL BENZENE & N-BUTANOL	Asthma-like symptoms may continue for months or even years after e condition known as reactive airways dysfunction syndrome (RADS) w compound. Main criteria for diagnosing RADS include the absence of of persistent asthma-like symptoms within minutes to hours of a docur include a reversible airflow pattern on lung function tests, moderate to and the lack of minimal lymphocytic inflammation, without eosinophilia disorder with rates related to the concentration of and duration of exposic a disorder that occurs as a result of exposure due to high concentrar reversible after exposure ceases. The disorder is characterized by different contents of the concentration of the concentration of and duration of exposure due to high concentrations.	exposure to the many thich can occur after previous airways of mented exposure to severe bronchial la. RADS (or asthmosure to the irritatinations of irritating sufficulty breathing, conficulty breathing, conficulty of the many thick are to the severe bronching sufficulty breathing, conficulty breathing, conficulty of the many thick are to the severe bronching sufficiently of the many thick are the severe bronching and the severe bronching the sev	terial ends. This may be due to a non-allergic er exposure to high levels of highly irritating disease in a non-atopic individual, with sudden onset o the irritant. Other criteria for diagnosis of RADS hyperreactivity on methacholine challenge testing, a) following an irritating inhalation is an infrequent group substance. On the other hand, industrial bronchitis ubstance (often particles) and is completely bugh and mucus production.
1,3,5-TRIMETHYL BENZENE & N-BUTANOL Acute Toxicity	Asthma-like symptoms may continue for months or even years after e condition known as reactive airways dysfunction syndrome (RADS) w compound. Main criteria for diagnosing RADS include the absence of of persistent asthma-like symptoms within minutes to hours of a docu include a reversible airflow pattern on lung function tests, moderate to and the lack of minimal lymphocytic inflammation, without eosinophilia disorder with rates related to the concentration of and duration of export is a disorder that occurs as a result of exposure due to high concentration exposure that occurs as a result of exposure due to high concentrations.	exposure to the many hich can occur after previous airways of mented exposure to a severe bronchial la. RADS (or asthmosure to the irritating sofficulty breathing, co	terial ends. This may be due to a non-allergic er exposure to high levels of highly irritating disease in a non-atopic individual, with sudden onset o the irritant. Other criteria for diagnosis of RADS hyperreactivity on methacholine challenge testing, a) following an irritating inhalation is an infrequent ing substance. On the other hand, industrial bronchitis bubstance (often particles) and is completely ough and mucus production.
1,3,5-TRIMETHYL BENZENE & N-BUTANOL	Asthma-like symptoms may continue for months or even years after e condition known as reactive airways dysfunction syndrome (RADS) w compound. Main criteria for diagnosing RADS include the absence of of persistent asthma-like symptoms within minutes to hours of a docur include a reversible airflow pattern on lung function tests, moderate to and the lack of minimal lymphocytic inflammation, without eosinophilic disorder with rates related to the concentration of and duration of export is a disorder that occurs as a result of exposure due to high concentration exposure due to high concentration after exposure ceases. The disorder is characterized by diff	exposure to the many thich can occur after previous airways of mented exposure to severe bronchial la. RADS (or asthmosure to the irritatinations of irritating sufficulty breathing, conficulty breathing, conficulty of the many thick are to the severe bronching sufficulty breathing, conficulty breathing, conficulty of the many thick are to the severe bronching sufficiently of the many thick are the severe bronching and the severe bronching the sev	terial ends. This may be due to a non-allergic er exposure to high levels of highly irritating disease in a non-atopic individual, with sudden onset o the irritant. Other criteria for diagnosis of RADS hyperreactivity on methacholine challenge testing, a) following an irritating inhalation is an infrequent g substance. On the other hand, industrial bronchitis ubstance (often particles) and is completely bugh and mucus production.

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Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	<b>*</b>

Legend: >

X − Data either not available or does not fill the criteria for classification
✓ − Data available to make classification

### **SECTION 12 Ecological information**

#### **Toxicity**

	Endpoint	Test Duration (hr)	Species	Value	Source
EPOXY HARDENER	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	48h	Crustacea	1.8mg/l	2
xylene	EC50	72h	Algae or other aquatic plants	4.6mg/l	2
	NOEC(ECx)	73h	Algae or other aquatic plants	0.44mg/l	2
	LC50	96h	Fish	2.6mg/l	2
	Endpoint	Test Duration (hr)	Species	Value	Sourc
	EC50	48h	Crustacea	13mg/L	5
4.0.5 (simulated become	BCF	1680h	Fish	23-342	7
1,3,5-trimethyl benzene	EC50	96h	Algae or other aquatic plants	3.084mg/l	2
	NOEC(ECx)	384h	Crustacea	0.257mg/l	2
	LC50	96h	Fish	5.216mg/l	2
	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	48h	Crustacea	>500mg/l	1
	NOEC(ECx)	504h	Crustacea	4.1mg/l	2
n-butanol	EC50	72h	Algae or other aquatic plants	>500mg/l	1
	EC50	96h	Algae or other aquatic plants	225mg/l	2
	LC50	96h	Fish	100- 500mg/l	4

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. **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)
1,3,5-trimethyl benzene	HIGH	HIGH
n-butanol	LOW (Half-life = 54 days)	LOW (Half-life = 3.65 days)

#### Bioaccumulative potential

Ingredient	Bioaccumulation
xylene	MEDIUM (BCF = 740)
1,3,5-trimethyl benzene	LOW (BCF = 342)
n-butanol	LOW (BCF = 0.64)

#### Mobility in soil

Ingredient	Mobility	
1,3,5-trimethyl benzene	LOW (Log KOC = 703)	
n-butanol	MEDIUM (Log KOC = 2.443)	

### **SECTION 13 Disposal considerations**

#### Waste treatment methods

### Product / Packaging disposal

- ▶ Containers may still present a chemical hazard/ danger when empty.
- Return to supplier for reuse/ recycling if possible.

#### Otherwise:

- If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
- ▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area in some areas certain wastes must be tracked.

their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

► Reduction

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- ▶ Reuse
- ▶ Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

- ▶ DO NOT allow wash water from cleaning or process equipment to enter drains.
- ▶ It may be necessary to collect all wash water for treatment before disposal.
- ▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- ▶ Where in doubt contact the responsible authority.

#### **SECTION 14 Transport information**

## Labels Required



### Marine Pollutant



HAZCHEM

•3Y; •3YE

### Land transport (ADG)

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

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

	7			
14.1. UN number	1263			
14.2. UN proper shipping name	Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)			
14.3. Transport hazard class(es)	ICAO/IATA Class	3		
	ICAO / IATA Subsidiary Hazard	Not Applicable		
	ERG Code	3L		
14.4. Packing group				
14.5. Environmental hazard	Environmentally hazardous			
	Special provisions		A3 A72 A192	
	Cargo Only Packing Instructions		366	
	Cargo Only Maximum Qty / Pack		220 L	
14.6. Special precautions for user	Passenger and Cargo Packing Instructions		355	
usei	Passenger and Cargo Maximum Qty / Pack		60 L	
	Passenger and Cargo Limited Quantity Packing Instructions		Y344	
	Passenger and Cargo Limited Maximum Qty / Pack		10 L	

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

oca transport (impo odac / dovoce)				
14.1. UN number	1263	1263		
14.2. UN proper shipping name	PAINT (including paint, lacqu	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)		
14.3. Transport hazard class(es)	IMDG Class IMDG Subsidiary Hazard	3 Not Applicable		
14.4. Packing group				
14.5 Environmental hazard	Marine Pollutant			
14.6. Special precautions for user	EMS Number F-E , S-E			

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Special provisions	163 223 367 955
Limited Quantities	5 L

#### 14.7. Maritime transport in bulk according to IMO instruments

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

Not Applicable

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

Product name	Group
xylene	Not Available
1,3,5-trimethyl benzene	Not Available
n-butanol	Not Available

#### 14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
xylene	Not Available
1,3,5-trimethyl benzene	Not Available
n-butanol	Not Available

#### **SECTION 15 Regulatory information**

#### Safety, health and environmental regulations / legislation specific for the substance or mixture

### xylene is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6

Australian Inventory of Industrial Chemicals (AIIC)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

### 1,3,5-trimethyl benzene is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

Australian Inventory of Industrial Chemicals (AIIC)

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

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6

Australian Inventory of Industrial Chemicals (AIIC)

### **Additional Regulatory Information**

Not Applicable

### National Inventory Status

National Inventory Status	
National Inventory	Status
Australia - AIIC / Australia Non- Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (xylene; 1,3,5-trimethyl benzene; n-butanol)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	All chemical substances in this product have been designated as TSCA Inventory 'Active'
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - FBEPH	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

### **SECTION 16 Other information**

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#### 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. 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.

#### **Definitions and abbreviations**

- ▶ PC TWA: Permissible Concentration-Time Weighted Average
- ▶ PC STEL: Permissible Concentration-Short Term Exposure Limit
- ► IARC: International Agency for Research on Cancer
  ► ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- ► TEEL: Temporary Emergency Exposure Limit。
- ▶ IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- ▶ OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- ▶ BCF: BioConcentration Factors
- BEI: Biological Exposure Index
- ▶ DNEL: Derived No-Effect Level
- ▶ PNEC: Predicted no-effect concentration
- MARPOL: International Convention for the Prevention of Pollution from Ships
- ▶ IMSBC: International Maritime Solid Bulk Cargoes Code
- IGC: International Gas Carrier Code
- ▶ IBC: International Bulk Chemical Code
- ▶ AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSL: Non-Domestic Substances List
- ▶ IECSC: Inventory of Existing Chemical Substance in China
- ▶ EINECS: European INventory of Existing Commercial chemical Substances
- ▶ ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ► ENCS: Existing and New Chemical Substances Inventory
- KECI: Korea Existing Chemicals Inventory
- ► NZIoC: New Zealand Inventory of Chemicals
- ▶ PICCS: Philippine Inventory of Chemicals and Chemical Substances
- ▶ TSCA: Toxic Substances Control Act
- TCSI: Taiwan Chemical Substance Inventory
- INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
- ▶ FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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