Method 502.2 - Volatile Organic Compounds (60 components)

Novachem Pty Ltd

Chemwatch Hazard Alert Code: **4**

Version No: **1.1**
Safety Data Sheet according to WHS and ADG requirements

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

Product Identifier

Product name	Method 502.2 - Volatile Organic Compounds (60 components)
Synonyms	M-502-10X
Proper shipping name	METHANOL
Other means of identification	Not Available

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

Relevant identified uses	Laboratory Chemical Reference Material

Details of the supplier of the safety data sheet

Registered company name	**Novachem Pty Ltd**
Address	25 Crissane Road, Heidelberg West Victoria 3081 Australia
Telephone	+61384151255
Fax	+61386250088
Website	www.novachem.com.au
Email	novachem@novachem.com.au

Emergency telephone number

Association / Organisation	**Victorian Poisons Information Centre**
Emergency telephone numbers	13 11 26
Other emergency telephone numbers	Not Available

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Poisons Schedule	Not Applicable
Classification [1]	Flammable Liquid Category 2, Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 3, Acute Toxicity (Inhalation) Category 3, Skin Corrosion/Irritation Category 2, Eye Irritation Category 2A, Carcinogenicity Category 1A, Reproductive Toxicity Category 1B, Specific target organ toxicity - single exposure Category 1, Specific target organ toxicity - single exposure Category 3 (narcotic effects), Specific target organ toxicity - repeated exposure Category 2, Acute Aquatic Hazard Category 3, Chronic Aquatic Hazard Category 3
Legend:	*1. Classified by Chemwatch; 2. Classification drawn from HSIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI*

Label elements

Hazard pictogram(s)	
SIGNAL WORD	**DANGER**

Hazard statement(s)

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
H315	Causes skin irritation.

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H319	Causes serious eye irritation.
H350	May cause cancer.
H360	May damage fertility or the unborn child.
H370	Causes damage to organs.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P270	Do not eat, drink or smoke when using this product.

Precautionary statement(s) Response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P307+P311	IF exposed: Call a POISON CENTER or doctor/physician.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P330	Rinse mouth.

Precautionary statement(s) Storage

P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Precautionary statement(s) Disposal

P501	Dispose of contents/container in accordance with local regulations.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
71-43-2	0.2	benzene
108-86-1	0.2	bromobenzene
74-97-5	0.2	bromochloromethane
75-27-4	0.2	bromodichloromethane
75-25-2	0.2	bromoform
104-51-8	0.2	butylbenzene
135-98-8	0.2	sec-butylbenzene
98-06-6	0.2	tert-butylbenzene
56-23-5	0.2	carbon tetrachloride
108-90-7	0.2	chlorobenzene
67-66-3	0.2	chloroform
95-49-8	0.2	o-chlorotoluene
106-43-4	0.2	p-chlorotoluene
124-48-1	0.2	dibromochloromethane
96-12-8	0.2	1,2-dibromo-3-chloropropane
106-93-4	0.2	ethylene dibromide
74-95-3	0.2	dibromomethane
95-50-1	0.2	1,2-dichlorobenzene
541-73-1	0.2	1,3-dichlorobenzene
106-46-7	0.2	1,4-dichlorobenzene
75-34-3	0.2	1,1-dichloroethane
107-06-2*	0.2	1,2-Dichloroethane
75-35-4	0.2	vinylidene chloride
156-59-2	0.2	cis-acetylene dichloride
156-60-5	0.2	trans-acetylene dichloride
78-87-5	0.2	1,2-dichloropropane

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142-28-9	0.2	1,3-dichloropropane
594-20-7	0.2	2,2-dichloropropane
563-58-6	0.2	1,1-dichloropropene
10061-01-5	0.2	cis-1,3-dichloropropene
10061-02-6	0.2	trans-1,3-dichloropropene
100-41-4	0.2	ethylbenzene
87-68-3	0.2	hexachlorobutadiene
98-82-8	0.2	isopropyl benzene - cumene
99-87-6	0.2	p-cymene
75-09-2*	0.2	Dichloromethane
91-20-3	0.2	naphthalene
103-65-1	0.2	propylbenzene
100-42-5	0.2	styrene
630-20-6	0.2	1,1,1,2-tetrachloroethane
79-34-5	0.2	1,1,2,2-tetrachloroethane
127-18-4	0.2	tetrachloroethylene
108-88-3	0.2	toluene
87-61-6	0.2	1,2,3-trichlorobenzene
120-82-1	0.2	1,2,4-trichlorobenzene
71-55-6	0.2	1,1,1-trichloroethane
79-00-5	0.2	1,1,2-trichloroethane
79-01-6	0.2	trichloroethylene
96-18-4	0.2	1,2,3-trichloropropane
95-63-6	0.2	1,2,4-trimethyl benzene
108-67-8	0.2	1,3,5-trimethyl benzene
95-47-6	0.2	o-xylene
108-38-3	0.2	m-xylene
106-42-3	0.2	p-xylene
74-83-9	0.2	methyl bromide
75-00-3	0.2	ethyl chloride
74-87-3	0.2	chloromethane
75-71-8	0.2	dichlorodifluoromethane
75-69-4	0.2	trichlorofluoromethane
75-01-4	0.2	vinyl chloride
67-56-1	88	methanol

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	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	If skin or hair contact occurs: ▸ Quickly but gently, wipe material off skin with a dry, clean cloth. ▸ Immediately 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. ▸ Transport to hospital, or doctor.
Inhalation	▸ If fumes or combustion products are inhaled remove from contaminated area. ▸ Lay patient down. Keep warm and rested. ▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. ▸ 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. ▸ Transport to hospital, or doctor, without delay.
Ingestion	▸ **IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.** ▸ For advice, contact a Poisons Information Centre or a doctor. ▸ Urgent hospital treatment is likely to be needed. ▸ In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition. ▸ If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist. ▸ If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS. **Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed**

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	otherwise: ▸ **INDUCE** vomiting with fingers down the back of the throat, **ONLY IF CONSCIOUS**. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. **NOTE:** Wear a protective glove when inducing vomiting by mechanical means. ▸ If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

Indication of any immediate medical attention and special treatment needed

for 1,3-dichloropropene:
- Remove ingested material by gastric aspiration and lavage. Use water as the lavage fluid.
- Demulcents such as alumina gels, but no fats or oils.
- Opiates, and atropine for the control of pain and intestinal spasm.
- Aminophylline (theophylline-ethylenediamine) intravenously slowly to correct bronchospasm.
- Oxygen and other measures for the management of adult respiratory distress syndrome.
- Digitalis and/or lidocaine in the event of cardiac disturbances.
- Wash extensively any contaminated areas of skin with soap and water. Discard contaminated clothing.
- A therapeutic trial with BAL or N-acetylcycsteine might be useful if instituted promptly after the exposure.
- Repeated function tests are desirable to detect and evaluate possible liver and kidney injury.

GOSSELIN, SMITH & HODGE: Clinical Toxicology of Commercial Products, 5th Ed.
Chlorobenzenes are readily adsorbed from the gastrointestinal tract; they are distributed into highly perfused tissues and accumulate in lipid tissues. Lipid accumulation is greatest for the more highly chlorinated chlorobenzene compounds. Chlorobenzenes are metabolised by microsomal oxidation to form arene oxide intermediates and then further to their corresponding chlorophenols which are excreted in the urine as mercapturic acids after conjugation with glutathione or as glucuronic acid or sulfate conjugates. A small percentage are eliminated unchanged in expired air or faeces.

for naphthalene intoxication: Naphthalene requires hepatic and microsomal activation prior to the production of toxic effects. Liver microsomes catalyse the initial synthesis of the reactive 1,2-epoxide intermediate which is subsequently oxidised to naphthalene dihydrodiol and alpha-naphthol. The 2-naphthoquinones are thought to produce haemolysis, the 1,2-naphthoquinones are thought to be responsible for producing cataracts in rabbits, and the glutathione-adducts of naphthalene-1,2-oxide are probably responsible for pulmonary toxicity. Suggested treatment regime:
- Induce emesis and/or perform gastric lavage with large amounts of warm water where oral poisoning is suspected.
- Instill a saline cathartic such as magnesium or sodium sulfate in water (15 to 30g).
- Demulcents such as milk, egg white, gelatin, or other protein solutions may be useful after the stomach is emptied but oils should be avoided because they promote absorption.
- If eyes/skin contaminated, flush with warm water followed by the application of a bland ointment.
- Severe anaemia, due to haemolysis, may require small repeated blood transfusions, preferably with red cells from a non-sensitive individual.
- Where intravascular haemolysis, with haemoglobinuria occurs, protect the kidneys by promoting a brisk flow of dilute urine with, for example, an osmotic diuretic such as mannitol. It may be useful to alkalinise the urine with small amounts of sodium bicarbonate but many researchers doubt whether this prevents blockage of the renal tubules.
- Use supportive measures in the case of acute renal failure. GOSSELIN, SMITH HODGE: Clinical Toxicology of Commercial Products, 5th Ed.

For acute and short term repeated exposures to methanol:
- Toxicity results from accumulation of formaldehyde/formic acid.
- Clinical signs are usually limited to CNS, eyes and GI tract Severe metabolic acidosis may produce dyspnea and profound systemic effects which may become intractable. All symptomatic patients should have arterial pH measured. Evaluate airway, breathing and circulation.
- Stabilise obtunded patients by giving naloxone, glucose and thiamine.
- Decontaminate with Ipecac or lavage for patients presenting 2 hours post-ingestion. Charcoal does not absorb well; the usefulness of cathartic is not established.
- Forced diuresis is not effective; haemodialysis is recommended where peak methanol levels exceed 50 mg/dL (this correlates with serum bicarbonate levels below 18 meq/L).
- Ethanol, maintained at levels between 100 and 150 mg/dL, inhibits formation of toxic metabolites and may be indicated when peak methanol levels exceed 20 mg/dL. An intravenous solution of ethanol in D5W is optimal.
- Folate, as leucovorin, may increase the oxidative removal of formic acid. 4-methylpyrazole may be an effective adjunct in the treatment. 8.Phenytoin may be preferable to diazepam for controlling seizure.

[Ellenhorn Barceloux: Medical Toxicology]

BIOLOGICAL EXPOSURE INDEX - BEI

Determinant	Index	Sampling Time	Comment
1. Methanol in urine	15 mg/l	End of shift	B, NS
2. Formic acid in urine	80 mg/gm creatinine	Before the shift at end of workweek	B, NS

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

NS: Non-specific determinant - observed following exposure to other materials.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

Water may be an ineffective extinguishing media for methanol fires; static explosions are reported for aqueous solutions as dilute as 30%. Water may be used to cool containers.
- Alcohol stable foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

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. ▸ Wear full body protective clothing with breathing apparatus. ▸ Prevent, by any means available, spillage from entering drains or water course. ▸ Use fire fighting procedures suitable for surrounding area.
Fire/Explosion Hazard	▸ Combustible. ▸ Slight fire hazard when exposed to heat or flame. ▸ Heating may cause expansion or decomposition leading to violent rupture of containers. ▸ On combustion, may emit toxic fumes of carbon monoxide (CO).

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	Combustion products include: carbon dioxide (CO2) formaldehyde other pyrolysis products typical of burning organic material. May emit poisonous fumes.
HAZCHEM	•2WE

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	Environmental hazard - contain spillage. ▸ Remove all ignition sources. ▸ Clean up all spills immediately. ▸ Avoid breathing vapours and contact with skin and eyes. ▸ Control personal contact with the substance, by using protective equipment.
Major Spills	Environmental hazard - contain spillage. ▸ Clear area of personnel and move upwind. ▸ Alert Fire Brigade and tell them location and nature of hazard. ▸ Wear full body protective clothing with breathing apparatus. ▸ Prevent, by all means available, spillage from entering drains or water courses.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	▸ Avoid all personal contact, including inhalation. ▸ Wear protective clothing when risk of exposure occurs. ▸ Use in a well-ventilated area. ▸ Prevent concentration in hollows and sumps. ▸ **DO NOT** allow clothing wet with material to stay in contact with skin
Other information	▸ Store in original containers. ▸ Keep containers securely sealed. ▸ Store in a cool, dry, well-ventilated area. ▸ Store away from incompatible materials and foodstuff containers.

Conditions for safe storage, including any incompatibilities

Suitable container	▸ Glass container is suitable for laboratory quantities ▸ Lined metal can, lined metal pail/ can. ▸ Plastic pail. ▸ Polyliner drum. ▸ Packing as recommended by manufacturer. For low viscosity materials ▸ Drums and jerricans must be of the non-removable head type. ▸ 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) and solids (between 15 C deg. and 40 deg C.): ▸ Removable head packaging; ▸ Cans with friction closures and ▸ low pressure tubes and cartridges may be used.
Storage incompatibility	Methanol: ▸ reacts violently with strong oxidisers, acetyl bromide, alkyl aluminium salts, beryllium dihydride, bromine, chromic acid, 1-chloro-3,3-difluoro-2-methoxycyclopropene, cyanuric chloride, diethylzinc, isophthaloyl chloride, nitric acid, perchloric acid, potassium-tert-butoxide, potassium sulfur diimide, Raney nickel catalysts, 2,4,6-trichlorotriazine, triethylaluminium, 1,3,3-trifluoro-2-methoxycyclopropene ▸ is incompatible with strong acids, strong caustics, alkaline earth and alkali metals, aliphatic amines, acetaldehyde, benzoyl peroxide, 1,3-bis(di-n-cyclopentadienyl iron)-2-propen-1-one, calcium carbide, chloroform, chromic anhydride, chromium trioxide, dialkylzinc, dichlorine oxide, dichloromethane, ethylene oxide, hypochlorous acid, isocyanates, isopropyl chlorocarbonate, lithium tetrahydroaluminate, magnesium, methyl azide, nitrogen dioxide, palladium, pentafluoroguanidine, perchloryl fluoride, phosphorus pentasulfide, phosphorus trioxide, potassium, tangerine oil, triisobutylaluminium ▸ mixtures with lead perchlorate, sodium hypochlorite are explosive ▸ may react with metallic aluminium at high temperatures ▸ slowly corrodes lead and aluminium ▸ may generate electrostatic charges, due to low conductivity, on flow or agitation ▸ attacks some plastics, rubber and coatings. Static induced flash fires have happened when filling plastic containers with methanol / water solutions with as low as 30% methanol content Dichloropropenes ▸ are incompatible with strong acids, oxidisers, active metals, aluminium or magnesium compounds, aliphatic amines, alkanolamines, alkaline materials ▸ reacts with certain materials such as rubber, leather and fur to produce a strong odour ▸ flow or agitation may generate electrostatic charges due to low conductivity 2,3-dichloro-1-propene (CAS RN: 78-88-6) ▸ is incompatible with aliphatic amines, alkanolamines, alkaline materials

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Alcohols
- are incompatible with strong acids, acid chlorides, acid anhydrides, oxidising and reducing agents.
- reacts, possibly violently, with alkaline metals and alkaline earth metals to produce hydrogen
- react with strong acids, strong caustics, aliphatic amines, isocyanates, acetaldehyde, benzoyl peroxide, chromic acid, chromium oxide, dialkylzincs, dichlorine oxide, ethylene oxide, hypochlorous acid, isopropyl chlorocarbonate, lithium tetrahydroaluminate, nitrogen dioxide, pentafluoroguanidine, phosphorus halides, phosphorus pentasulfide, tangerine oil, triethylaluminium, triisobutylaluminium
- should not be heated above 49 deg. C. when in contact with aluminium equipment

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.
- Avoid storage with reducing agents.
- 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.

Haloaryl compounds (halogenated aromatics), though normally not very reactive, may be sufficiently activated by other substituents or by a few specific reaction conditions, to undergo violent reactions.
BRETHERICK L.: Handbook of Reactive Chemical Hazards
- Avoid contact with aluminium and its alloys (including storage containers). Formation of aluminium chloride may catalyse further self-accelerating attack on the metal (Friedel-Crafts reaction) leading to violent explosion.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	benzene	Benzene	1 ppm / 3.2 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	bromochloromethane	Chlorobromomethane	200 ppm / 1060 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	bromoform	Bromoform	0.5 ppm / 5.2 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	carbon tetrachloride	Carbon tetrachloride	0.1 ppm / 0.63 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	chlorobenzene	Chlorobenzene	10 ppm / 46 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	chloroform	Chloroform	2 ppm / 10 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	o-chlorotoluene	o-Chlorotoluene	50 ppm / 259 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	1,2-dichlorobenzene	o-Dichlorobenzene	25 ppm / 150 mg/m3	301 mg/m3 / 50 ppm	Not Available	Not Available
Australia Exposure Standards	1,4-dichlorobenzene	p-Dichlorobenzene	25 ppm / 150 mg/m3	300 mg/m3 / 50 ppm	Not Available	Not Available
Australia Exposure Standards	1,1-dichloroethane	1,1-Dichloroethane	100 ppm / 412 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	1,2-Dichloroethane	Ethylene dichloride	10 ppm / 40 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	vinylidene chloride	Vinylidene chloride	5 ppm / 20 mg/m3	79 mg/m3 / 20 ppm	Not Available	Not Available
Australia Exposure Standards	1,2-dichloropropane	Propylene dichloride	75 ppm / 347 mg/m3	508 mg/m3 / 110 ppm	Not Available	Not Available
Australia Exposure Standards	ethylbenzene	Ethyl benzene	100 ppm / 434 mg/m3	543 mg/m3 / 125 ppm	Not Available	Not Available
Australia Exposure Standards	hexachlorobutadiene	Hexachlorobutadiene	0.02 ppm / 0.21 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	isopropyl benzene - cumene	Cumene	25 ppm / 125 mg/m3	375 mg/m3 / 75 ppm	Not Available	Not Available
Australia Exposure Standards	Dichloromethane	Methylene chloride	50 ppm / 174 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	naphthalene	Naphthalene	10 ppm / 52 mg/m3	79 mg/m3 / 15 ppm	Not Available	Not Available
Australia Exposure Standards	styrene	Styrene, monomer	50 ppm / 213 mg/m3	426 mg/m3 / 100 ppm	Not Available	Not Available
Australia Exposure Standards	1,1,2,2-tetrachloroethane	1,1,2,2-Tetrachloroethane	1 ppm / 6.9 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	tetrachloroethylene	Perchloroethylene	50 ppm / 340 mg/m3	1020 mg/m3 / 150 ppm	Not Available	Not Available

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Australia Exposure Standards	toluene	Toluene	50 ppm / 191 mg/m3	574 mg/m3 / 150 ppm	Not Available	Not Available
Australia Exposure Standards	1,2,4-trichlorobenzene	1,2,4-Trichlorobenzene	Not Available	Not Available	5 ppm / 37 mg/m3	Not Available
Australia Exposure Standards	1,1,1-trichloroethane	1,1,1-Trichloroethane	100 ppm / 555 mg/m3	1110 mg/m3 / 200 ppm	Not Available	Not Available
Australia Exposure Standards	1,1,2-trichloroethane	1,1,2-Trichloroethane	10 ppm / 55 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	trichloroethylene	Trichloroethylene	10 ppm / 54 mg/m3	216 mg/m3 / 40 ppm	Not Available	Not Available
Australia Exposure Standards	1,2,3-trichloropropane	1,2,3-Trichloropropane	10 ppm / 60 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	o-xylene	Xylene (o-, m-, p-isomers)	80 ppm / 350 mg/m3	655 mg/m3 / 150 ppm	Not Available	Not Available
Australia Exposure Standards	m-xylene	Xylene (o-, m-, p-isomers)	80 ppm / 350 mg/m3	655 mg/m3 / 150 ppm	Not Available	Not Available
Australia Exposure Standards	p-xylene	Xylene (o-, m-, p-isomers)	80 ppm / 350 mg/m3	655 mg/m3 / 150 ppm	Not Available	Not Available
Australia Exposure Standards	methyl bromide	Methyl bromide	5 ppm / 19 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	ethyl chloride	Ethyl chloride	1000 ppm / 2640 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	chloromethane	Methyl chloride	50 ppm / 103 mg/m3	207 mg/m3 / 100 ppm	Not Available	Not Available
Australia Exposure Standards	dichlorodifluoromethane	Dichlorodifluoromethane	1000 ppm / 4950 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	trichlorofluoromethane	Trichlorofluoromethane	Not Available	Not Available	1000 ppm / 5620 mg/m3	Not Available
Australia Exposure Standards	vinyl chloride	Vinyl chloride, monomer	5 ppm / 13 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	methanol	Methyl alcohol	200 ppm / 262 mg/m3	328 mg/m3 / 250 ppm	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
benzene	Benzene	Not Available	Not Available	Not Available
bromobenzene	Bromobenzene; (Phenyl bromide)	2.6 ppm	29 ppm	74 ppm
bromochloromethane	Bromochloromethane	600 ppm	830 ppm	5,000 ppm
bromodichloromethane	Bromodichloromethane	1.3 mg/m3	14 mg/m3	85 mg/m3
bromoform	Bromoform; (Tribromomethane)	1.5 ppm	6.8 ppm	41 ppm
butylbenzene	Butylbenzene, n-; (1-Phenylbutane)	6.2 ppm	68 ppm	410 ppm
sec-butylbenzene	Butylbenzene, sec-; (2-Phenylbutane)	1.1 ppm	12 ppm	69 ppm
tert-butylbenzene	Butylbenzene, tert-	1.7 ppm	18 ppm	110 ppm
carbon tetrachloride	Carbon tetrachloride	1.2 ppm	Not Available	Not Available
chlorobenzene	Chlorobenzene; (Benzene chloride)	Not Available	Not Available	Not Available
chloroform	Chloroform	2 ppm	Not Available	Not Available
o-chlorotoluene	Chlorotoluene, 2-; (o-Chlorotoluene)	75 ppm	310 ppm	1,800 ppm
p-chlorotoluene	Chlorotoluene, 4-; (p-Tolyl chloride)	1.2 ppm	13 ppm	80 ppm
dibromochloromethane	Dibromochloromethane; (Chlorodibromomethane)	1.1 mg/m3	12 mg/m3	73 mg/m3
1,2-dibromo-3-chloropropane	Dibromo-3-chloropropane, 1,2-; (DBCP)	0.003 ppm	2.2 ppm	4.3 ppm
ethylene dibromide	Ethylene dibromide; (Dibromoethane)	Not Available	Not Available	Not Available
dibromomethane	Dibromomethane; (Methylene dibromide)	3 ppm	33 ppm	200 ppm
1,2-dichlorobenzene	Dichlorobenzene, o-	50 ppm	170 ppm	1,000 ppm
1,3-dichlorobenzene	Dichlorobenzene, m-	6 ppm	66 ppm	400 ppm
1,4-dichlorobenzene	Dichlorobenzene, p-	30 ppm	170 ppm	1,000 ppm
1,1-dichloroethane	Ethylidene chloride, 1,1-; (1,1-Dichloroethane)	300 ppm	670 ppm	4,000 ppm
1,2-Dichloroethane	Ethylene dichloride; (1,2-Dichloroethane)	Not Available	Not Available	Not Available
vinylidene chloride	Vinylidene chloride; (1,1-Dichloroethylene)	45 ppm	Not Available	Not Available
cis-acetylene dichloride	Dichloroethylene, cis-1,2-	Not Available	Not Available	Not Available
trans-acetylene dichloride	Dichloroethylene, trans-1,2-	Not Available	Not Available	Not Available
1,2-dichloropropane	Dichloropropane, 1,2-; (Propylene dichloride)	30 ppm	220 ppm	2,000 ppm
1,3-dichloropropane	Dichloropropane, 1,3-	5.4 ppm	59 ppm	350 ppm
2,2-dichloropropane	Dichloropropane, 2,2-	2.6 ppm	29 ppm	170 ppm
1,1-dichloropropene	Dichloropropene, 1,1-	1.3 ppm	15 ppm	87 ppm
ethylbenzene	Ethyl benzene	Not Available	Not Available	Not Available

Continued...

hexachlorobutadiene	Hexachlorobutadiene	Not Available	Not Available	Not Available
isopropyl benzene - cumene	Cumene; (Isopropyl benzene)	Not Available	Not Available	Not Available
p-cymene	Isopropyltoluene, 4-; (p-Cymene)	120 mg/m3	1,300 mg/m3	1,900 mg/m3
Dichloromethane	Methylene chloride; (Dichloromethane)	Not Available	Not Available	Not Available
naphthalene	Naphthalene	15 ppm	83 ppm	500 ppm
propylbenzene	Propylbenzene, n-; (Isocumene)	3 ppm	33 ppm	2300 ppm
styrene	Styrene	Not Available	Not Available	Not Available
1,1,1,2-tetrachloroethane	Tetrachloroethane, 1,1,1,2-	0.2 ppm	2.2 ppm	13 ppm
1,1,2,2-tetrachloroethane	Tetrachloroethane, 1,1,2,2-	3 ppm	120 ppm	150 ppm
tetrachloroethylene	Perchloroethylene; (Tetrachloroethylene)	Not Available	Not Available	Not Available
toluene	Toluene	Not Available	Not Available	Not Available
1,2,3-trichlorobenzene	Trichlorobenzene, 1,2,3-	15 mg/m3	60 mg/m3	360 mg/m3
1,2,4-trichlorobenzene	Trichlorobenzene, 1,2,4-	0.45 ppm	5 ppm	20 ppm
1,1,1-trichloroethane	Trichloroethane, 1,1,1-; (Methyl chloroform)	Not Available	Not Available	Not Available
1,1,2-trichloroethane	Trichloroethane, 1,1,2-	30 ppm	180 ppm	500 ppm
trichloroethylene	Trichloroethylene	Not Available	Not Available	Not Available
1,2,3-trichloropropane	Trichloropropane, 1,2,3-	0.015 ppm	170 ppm	1,000 ppm
1,2,4-trimethyl benzene	Permafluor E+	140 mg/m3	360 mg/m3	2,200 mg/m3
1,2,4-trimethyl benzene	Trimethylbenzene, 1,2,4-; (Pseudocumene)	Not Available	Not Available	480 ppm
1,3,5-trimethyl benzene	Mesitylene; (1,3,5-Trimethylbenzene)	Not Available	Not Available	480 ppm
m-xylene	Xylene, m- (inlcudes o- (95-47-6) and p- (106-42-3) isomers)	150 ppm	200 ppm	1,000 ppm
methyl bromide	Methyl bromide; (Bromomethane)	19 ppm	Not Available	Not Available
ethyl chloride	Ethyl chloride; (Chloroethane)	300 ppm	5100 ppm	20000 ppm
chloromethane	Methyl chloride	Not Available	Not Available	Not Available
dichlorodifluoromethane	Dichlorodifluoromethane; (Freon 12, CFC 12)	3,000 ppm	10,000 ppm	50,000 ppm
trichlorofluoromethane	Trichlorofluoromethane; (Fluorotrichloromethane; Freon 11)	140 ppm	1,500 ppm	10,000 ppm
vinyl chloride	Vinyl chloride	Not Available	Not Available	Not Available
methanol	Methyl alcohol; (Methanol)	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
benzene	500 ppm	Not Available
bromobenzene	Not Available	Not Available
bromochloromethane	2,000 ppm	Not Available
bromodichloromethane	Not Available	Not Available
bromoform	850 ppm	Not Available
butylbenzene	Not Available	Not Available
sec-butylbenzene	Not Available	Not Available
tert-butylbenzene	Not Available	Not Available
carbon tetrachloride	200 ppm	Not Available
chlorobenzene	1,000 ppm	Not Available
chloroform	500 ppm	Not Available
o-chlorotoluene	Not Available	Not Available
p-chlorotoluene	Not Available	Not Available
dibromochloromethane	Not Available	Not Available
1,2-dibromo-3-chloropropane	Not Available	Not Available
ethylene dibromide	100 ppm	Not Available
dibromomethane	Not Available	Not Available
1,2-dichlorobenzene	200 ppm	Not Available
1,3-dichlorobenzene	Not Available	Not Available
1,4-dichlorobenzene	150 ppm	Not Available
1,1-dichloroethane	3,000 ppm	Not Available
1,2-Dichloroethane	50 ppm	Not Available
vinylidene chloride	Not Available	Not Available
cis-acetylene dichloride	Not Available	Not Available
trans-acetylene dichloride	Not Available	Not Available
1,2-dichloropropane	400 ppm	Not Available
1,3-dichloropropane	Not Available	Not Available
2,2-dichloropropane	Not Available	Not Available
1,1-dichloropropene	Not Available	Not Available

Continued...

cis-1,3-dichloropropene	Not Available	Not Available
trans-1,3-dichloropropene	Not Available	Not Available
ethylbenzene	800 ppm	Not Available
hexachlorobutadiene	Not Available	Not Available
isopropyl benzene - cumene	900 ppm	Not Available
p-cymene	Not Available	Not Available
Dichloromethane	2,300 ppm / 2,000 ppm	Not Available
naphthalene	250 ppm	Not Available
propylbenzene	Not Available	Not Available
styrene	700 ppm	Not Available
1,1,1,2-tetrachloroethane	Not Available	Not Available
1,1,2,2-tetrachloroethane	100 ppm	Not Available
tetrachloroethylene	150 ppm	Not Available
toluene	500 ppm	Not Available
1,2,3-trichlorobenzene	Not Available	Not Available
1,2,4-trichlorobenzene	Not Available	Not Available
1,1,1-trichloroethane	700 ppm	Not Available
1,1,2-trichloroethane	100 ppm	Not Available
trichloroethylene	1,000 ppm	Not Available
1,2,3-trichloropropane	100 ppm	Not Available
1,2,4-trimethyl benzene	Not Available	Not Available
1,3,5-trimethyl benzene	Not Available	Not Available
o-xylene	900 ppm	Not Available
m-xylene	900 ppm	Not Available
p-xylene	900 ppm	Not Available
methyl bromide	250 ppm	Not Available
ethyl chloride	3,800 ppm	Not Available
chloromethane	2,000 ppm / 2,300 ppm	Not Available
dichlorodifluoromethane	15,000 ppm	Not Available
trichlorofluoromethane	2,000 ppm	Not Available
vinyl chloride	Not Available	Not Available
methanol	6,000 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. 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.
Personal protection	
Eye and face protection	▸ Safety glasses with side shields. ▸ Chemical goggles. ▸ 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.
Skin protection	See Hand protection below
Hands/feet protection	▸ Wear chemical protective gloves, e.g. PVC. ▸ Wear safety footwear or safety gumboots, e.g. Rubber **NOTE:** ▸ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. ▸ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. 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.
Body protection	See Other protection below
Other protection	▸ Employees working with confirmed human carcinogens should be provided with, and be required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area. [AS/NZS ISO 6529:2006 or national equivalent] ▸ Employees engaged in handling operations involving carcinogens should be provided with, and required to wear and use half-face filter-type respirators with filters for dusts, mists and fumes, or air purifying canisters or cartridges. A respirator affording higher levels of protection may be substituted.

Continued...

- [AS/NZS 1715 or national equivalent]
- Emergency deluge showers and eyewash fountains, supplied with potable water, should be located near, within sight of, and on the same level with locations where direct exposure is likely.
- Prior to each exit from an area containing confirmed human carcinogens, employees should be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers must be identified with suitable labels. For maintenance and decontamination activities, authorized employees entering the area should be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood.
- Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood.

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:
"Forsberg Clothing Performance Index".
The effect(s) of the following substance(s) are taken into account in the ***computer-generated*** selection:
Method 502.2 - Volatile Organic Compounds (60 components)

Material	CPI
BUTYL	C
BUTYL/NEOPRENE	C
CPE	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
SARANEX-23 2-PLY	C
SARANEX-23	C
TEFLON	C
VITON	C
VITON/CHLOROBUTYL	C
VITON/NEOPRENE	C
VITON/NITRILE	C

* 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.

Respiratory protection

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.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Clear liquid

Physical state	Liquid	**Relative density (Water = 1)**	0.791
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	385
pH (as supplied)	Not Available	**Decomposition temperature**	Not Available
Melting point / freezing point (°C)	-93.9	**Viscosity (cSt)**	Not Available
Initial boiling point and boiling range (°C)	65	**Molecular weight (g/mol)**	Not Available
Flash point (°C)	11 (tcc)	**Taste**	Not Available

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Evaporation rate	5.9 Not Available	**Explosive properties**	Not Available
Flammability	HIGHLY FLAMMABLE.	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	36.5	**Surface Tension (dyn/cm or mN/m)**	Not Available
Lower Explosive Limit (%)	6.7	**Volatile Component (%vol)**	99.9+
Vapour pressure (kPa)	12.9323 (20C)	**Gas group**	Not Available
Solubility in water (g/L)	Miscible	**pH as a solution (1%)**	Not Available
Vapour density (Air = 1)	1.1 g/L	**VOC g/L**	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	▸ Static induced flash fires have happened when filling plastic containers with methanol / water solutions with as low as 30% methanol content. ▸ Unstable in the presence of incompatible materials. ▸ Product is considered stable. ▸ Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	There is strong evidence to suggest that this material can cause, if inhaled once, very serious, irreversible damage of organs. The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. 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. The acute toxicity of inhaled alkylbenzene is best described by central nervous system depression. These compounds may also act as general anaesthetics. Whole body symptoms of poisoning include light-headedness, nervousness, apprehension, a feeling of well-being, confusion, dizziness, drowsiness, ringing in the ears, blurred or double vision, vomiting and sensations of heat, cold or numbness, twitching, tremors, convulsions, unconsciousness, depression of breathing, and arrest. Heart stoppage may result from cardiovascular collapse. On exposure to mixed trimethylbenzenes, some people may become nervous, tensed, anxious and have difficult breathing. There may be a reduction red blood cells and bleeding abnormalities. There may also be drowsiness. Intoxication, depression of the central nervous system and death can occur at high concentrations. Individuals exposed to higher concentrations may show anaemia, weakness, dizziness, weight loss, vomiting, liver and kidney damage. Long term inhalational exposure causes lung damage and painful irritation of the nose and eyes at higher doses. There may be tremors, eye cataracts and distortion of smell. Minor but regular methanol exposures may effect the central nervous system, optic nerves and retinae. Symptoms may be delayed, with headache, fatigue, nausea, blurring of vision and double vision. Continued or severe exposures may cause damage to optic nerves, which may become severe with permanent visual impairment even blindness resulting. **WARNING**: Methanol is only slowly eliminated from the body and should be regarded as a cumulative poison which cannot be made non-harmful [*CCINFO*] Inhalation of naphthalene vapour is linked with headache, loss of appetite, nausea, damage to the eyes and kidneys. According to animal testing, long term exposure may cause excessive weakness and increased salivation, weight loss,difficulty breathing, collapse, and evidence of damage to the skin, liver and lungs. Dichloroprenes at concentrations exceeding 1500 ppm may cause lachrymation, dizziness, gasping, refusal to breath, coughing, substernal pain, bronchospasm, extreme respiratory distress, coma and delayed injury to liver, kidney and heart. Effects may continue for years after exposure and include malaise, headache, chest and abdominal discomfort and irritability. When 1,3-dichloropropene is detected by odour by most people in the range 1-3 parts per million, the odour is faint and fatigues rapidly, therefore warning properties are poor. Dichloropropenes at concentrations greater than 0.15% may cause excessive secretion of tears, dizziness, gasping, breathlessness, coughing, chest pain, airway spasm, extreme respiratory distress, coma and delayed injury to the liver, kidney and heart. These effects may last for years, and include general unwellness, headache, chest, and abdominal discomfort, and irritability. Headache is frequent. Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may produce toxic effects.
Ingestion	**Toxic effects** may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 40 gram may be fatal or may produce serious damage to the health of the individual. Swallowing 1,3-dichloropropene may lead to acute gastrointestinal distress, with congestion and fluid build-up in the lungs. 1,3-dichloropropene can damage the lungs and affect the liver and kidney. Ingestion of naphthalene and related compounds may produce abdominal cramps with nausea, vomiting, diarrhoea, headache, profuse sweating, listlessness, confusion, and in severe poisonings, coma with or without convulsions. Irritation of the bladder may also occur, producing urgency, painful urination, and the passage of brown or black urine with or without albumin or casts. Methanol may produce a burning or painful sensation in the mouth, throat, chest, and stomach. This may be accompanied by nausea, vomiting, headache, dizziness, shortness of breath, weakness, fatigue, leg cramps, restlessness, confusion, drunken behaviour, visual disturbance, drowsiness, coma and death. Inhalation and oral exposure to dichlorobenzene causes increase in liver weight at low levels and severe liver degeneration, tremors, central nervous system depression and death at higher levels.It is readily absorbed through the gut and airways. Absorption through the skin is unknown. Repeated and long term use may cause blurred vision, kidney damage, poor development of the bone marrow, damage to the lining of the nose and small bowel, as well as deposits in the heart and skeletal muscle.
Skin Contact	Skin contact with the material may produce toxic effects; systemic effects may result following absorption. The material may accentuate any pre-existing dermatitis condition Severe skin irritation produced by 1,3-dichloropropene is characterised by a marked inflammatory response to the superficial skin and underlying tissues.

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	1,2-dichlorobenzene (DCB) can be irritating when applied to the skin. Skin inflammation has been noted after a follow-up patch test. Skin lesions may be characterised by a burning sensation and diffuse redness of the treated area which progresses to a darker red colour and blisters within 24 hours and a brown pigment after 3 months. Workers sensitised to naphthalene and related compounds show an inflammation of the skin with scaling and reddening. Some individuals show an allergic reaction. 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. There is strong evidence to suggest that this material, on a single contact with skin, can cause serious, irreversible damage of organs.
Eye	0.1% dichloropropene was irritating to the nose and eyes of rats and caused excessive tear secretion if exposure was prolonged. Undiluted 1,2-dichlorobenzene (DCB) applied to the eye may cause pain and slight eye irritation which may clear within 5 days without residual injury. Vapours from heated 1,4-DCB may cause mild corneal damage. Solid particles in the eye are reported to be very painful. However, a workplace study showed no evidence of adverse effects in workers with particular reference to eye lesions including cataracts though painful irritation of eyes and nose were recorded. 510meth Long term exposure to naphthalene has produced clouding of the lens (cataracts) in workers. There is some evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Moderate inflammation may be expected with redness; conjunctivitis may occur with prolonged exposure.
Chronic	Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. There is sufficient evidence to suggest that this material directly causes cancer in humans. 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. Prolonged or repeated exposure to 1,3-dichloropropene may produce inflammation of the skin, severe irritation and possibly burns. Animal studies indicate it may sensitise skin, and produce an increase in tumours (including cancer) of the liver, forestomach, bladder and lung. Long term inhalation of dichlorobenzenes may cause cancerous changes to liver, kidney, thyroid gland and blood. Some evidence suggests a link between exposure and blood cancer (leukaemia). Workers exposed to the vapour experienced nose and eye irritation. The liver, nervous system and blood are systemic targets. Long-term exposure to methanol vapour, at concentrations exceeding 3000 ppm, may produce cumulative effects characterised by gastrointestinal disturbances (nausea, vomiting), headache, ringing in the ears, insomnia, trembling, unsteady gait, vertigo, conjunctivitis and clouded or double vision. Liver and/or kidney injury may also result. Animal testing indicates that inhalation of naphthalene may increase the incidence of respiratory tumours and may aggravate chronic inflammation. Chronic exposure to benzene may cause headache, fatigue, loss of appetite and lassitude with incipient blood effects including anaemia and blood changes. Benzene is a myelotoxicant known to suppress bone- marrow cell proliferation and to induce haematologic disorders in humans and animals.

Method 502.2 - Volatile Organic Compounds (60 components)

TOXICITY	IRRITATION
Not Available	Not Available

benzene

TOXICITY	IRRITATION
dermal (mouse) LD50: 48 mg/kg[2]	Eye (rabbit): 2 mg/24h - SEVERE
Inhalation (rat) LC50: 17480.0325 mg/l/7h[2]	SKIN (rabbit):20 mg/24h - moderate
Oral (rat) LD50: 690-1230 mg/kg[1]	

bromobenzene

TOXICITY	IRRITATION
Inhalation (mouse) LC50: 10.5 mg/l/2H[2]	Not Available
Oral (rat) LD50: 2383 mg/kg[2]	

bromochloromethane

TOXICITY	IRRITATION
Dermal (rabbit) LD50: >5000 mg/kg[2]	Not Available
Inhalation (mouse) LC50: 21.0525 mg/l/7H[2]	
Oral (rat) LD50: 5000 mg/kg[2]	

bromodichloromethane

TOXICITY	IRRITATION
Oral (rat) LD50: 430 mg/kg[2]	Not Available

bromoform

TOXICITY	IRRITATION
Inhalation (mouse) LC50: 6.05 mg/l/2H[2]	Not Available
Oral (rat) LD50: 933 mg/kg[2]	

butylbenzene

TOXICITY	IRRITATION
Dermal (rabbit) LD50: >2000 mg/kg[1]	Not Available
Oral (rat) LD50: 5210 mg/kg[1]	

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Legend:	*1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*

BENZENE	Inhalation (man) TCLo: 150 ppm/1y - I
BROMODICHLOROMETHANE	Changes in circulation in brain and coverings,somnolence, tremor, ataxia, antipsychotic behaviour, fatty liver degeneration, liver changes, haemorrhage recorded.
BROMOFORM	Changes in circulation, lachrymation, somnolence, ataxia, antipsychotic behaviour, respiratory tract tumours, fatty liver degeneration, haemorrhage recorded.
BUTYLBENZENE	None available.
CHLOROBENZENE	Mammalian somatic cell mutagen NTP Carcinogenesis studies indicate some positive findings for rat following administration by gavage.
O-CHLOROTOLUENE	O-chlorotoluene is corrosive to skin. Animal testing shows that o-chlorotoluene can cause non-specific toxicity. Testing shows that it has not caused mutations or genetic damage. It has been shown to affect fertility in animals. for o-chlorotoluene (syn: 2-chlorotoluene) **Acute toxicity:** The acute oral toxicity: LD 50 (Rat, male): 3227 mg/kg bw; LD50 (Rat, female): 3860 mg/kg bw The acute inhalation toxicity: LC50 (Rat): 37517 mg/m3 (4 h) The acute dermal toxicity: LD 50 (Rat): > 1083 mg/kg bw; LD50 (Rabbit): > 2165 mg/kg bw 2-Chlorotoluene, tested according to OECD Guideline 404, is slightly irritating to the skin. However, when tested under occlusive conditions, the substance is corrosive. 2-Chlorotoluene, tested according to OECD Guideline 405, was irritating to the eye in 1 out of 3 animals. 2-Chlorotoluene, tested according to OECD Guideline 406, is not sensitising to the skin of guinea pigs. * SIDS HPV Challenge Program
1,2-DIBROMO-3-CHLOROPROPANE	Carcinogenic by RTECS criteria Reproductive effector in rats and rabbits Olfaction, respiratory tract, kidney, adrenal cortex, and skin tumours, paternal effects, foetotoxicity, foetolethality and specific developmental abnormalities involving urogenital system recorded.
ETHYLENE DIBROMIDE	Inhalation (rat) TCLO: 10 ppm/2y - I Eye (rabbit): 1%
1,2-DICHLOROBENZENE	Diffuse and zonal hepatocellular necrosis, lachrymation, general anaesthesia, paternal effects, specific developmental anormalities (musculoskeletal sysytem) recorded.
1,4-DICHLOROBENZENE	Eye effects, respiratory tract changes, diarrhoea, specific developmental effects (cardiovascular system) recorded.
1,1-DICHLOROETHANE	Equivocal tumorigenic agent by RTECS criteria.
1,2-Dichloroethane	for ethylene dichloride (syn: 1,2-dichloroethane, EDC). In humans, incidental ingestion has been reported as cause of death; occupational dermal and inhalation exposure have produced marked systemic intoxication: primarily unspecific neurotoxic symptoms developed such as nausea, vomiting, headache, stupor, dysequilibrium, and - in fatal cases – coma followed by respiratory arrest. Severe cases also involved lesions of liver, kidney, and adrenal glands. High dermal and respiratory exposures caused skin and eye irritation.
VINYLIDENE CHLORIDE	For vinylidene chloride: In humans, inhaling vinylidene chloride at a concentration of 0.4% causes intoxication that may lead to unconsciousness. Stabilised vinylidene chloride also irritates the airways, eyes and skin. Prolonged or repeated exposure below levels that lead to loss of sensation has caused kidney and liver damage. In animals, acute inhalation has also caused irritation of the mucous membranes, depression of the central nervous system, and progressive toxicity to the heart (shown as a slow or irregular heartbeat); lung damage also occurred.
CIS-ACETYLENE DICHLORIDE	Rat liver cell mutagen in vitro
TRANS-ACETYLENE DICHLORIDE	Hamster lung cell mutagen in vitro
1,2-DICHLOROPROPANE	* Dow Chemical
ETHYLBENZENE	Ethylbenzene is readily absorbed when inhaled, swallowed or in contact with the skin. It is distributed throughout the body, and passed out through urine. It may irritate the skin, eyes and may cause hearing loss if exposed to high doses. Long Term exposure may cause damage to the kidney, liver and lungs, including a tendency to cancer formation, according to animal testing. Liver changes, utheral tract, effects on fertility, foetotoxicity, specific developmental abnormalities (musculoskeletal system) recorded.
HEXACHLOROBUTADIENE	Somnolence, irritability, effects on fertility, foetotoxicity, specific developmental abnormalities (central nervous system), effects on newborn
ISOPROPYL BENZENE - CUMENE	Cumene is reasonably anticipated to be a human carcinogen based on sufficient evidence of carcinogenicity from studies in experimental animals. Cumene caused tumours at several tissue sites, including lung and liver in mice and kidney in male rats. Several proposed mechanisms of carcinogenesis support the relevance to humans of lung and liver tumours in experimental animals. Specifically, there is evidence that humans and experimental animals metabolise cumene through similar metabolic pathways. There is also evidence that cumene is genotoxic in some tissues, based on findings of DNA damage in rodent lung and liver. Furthermore, mutations of the K-ras oncogene and p53 tumor-suppressor gene observed in cumene-induced lung tumours in mice, along with altered expression of many other genes, resemble molecular alterations found in human lung and other cancers. The relevance of the kidney tumors to cancer in humans is uncertain; there is evidence that a species-specific mechanism not relevant to humans contributes to their induction, but it is possible that other mechanisms relevant to humans, such as genotoxicity, may also contribute to kidney-tumour formation in male rats.
Dichloromethane	
TOLUENE	For toluene: Acute toxicity: Humans exposed to high levels of toluene for short periods of time experience adverse central nervous system effects ranging from headaches to intoxication, convulsions, narcosis (sleepiness) and death. When inhaled or swallowed, toluene can cause severe central nervous system depression, and in large doses has a narcotic effect. 60mL has caused death. Death of heart muscle fibres, liver swelling, congestion and bleeding of the lungs and kidney injury were all found on autopsy.
1,2,4-TRICHLOROBENZENE	Bacterial mutagen Altered sleep times, somnolence, convulsions, ataxia, maternal effects, effects on embryo, foetotoxicity, foetolethality recorded.
1,1,1-TRICHLOROETHANE	1,1,1-trichloroethane vapour is mainly absorbed through the airways and rapidly eliminated from blood. High concentrations can cause nerve and liver damage and may cause mutations and developmental delay, according to animal testing.
1,1,2-TRICHLOROETHANE	For 1,1,2-trichloroethane (TCE): TCE is irritating to the skin, eyes, upper airway, and stomach. There is no available information regarding skin sensitisation. In humans, TCE was reported to have narcotic effects at low concentrations, and irritate the conjunctiva, the airway lining and the skin. Gastrointestinal tract complaints, fatty degeneration of the kidneys and lung damage by prolonged exposure were reported. Reproductive effector
TRICHLOROETHYLENE	Overexposure to trichloroethylene fumes causes liver damage, irregular heartbeat, brain depression and death. Deaths due to this substances have been reported in the workplace, often in degreasing operations, and have been attributed mostly to irregularities in heart rhythm or depression of the central nervous system. Repeated oral intake produces appetite loss, nausea and vomiting. A rare disease of the small intestine, seen in Japanese lens cleaners and polishers were attributed to exposure in the workplace.

Continued...

1,2,3-TRICHLOROPROPANE	for 1,2,3-trichloropropane: Studies with rats and mice suggest that 1,2,3-trichloropropane is similarly toxic following acute- and intermediate-duration exposure by either the inhalation or oral route. Lethal concentrations as low as approximately 300 ppm for inhalation exposure and lethal doses in the range of 125-250 mg/kg for gavage exposure indicate that the 1,2,3-trichloropropane is likely to be moderately toxic for humans. However, 1,2,3-trichloropropane may be less toxic when ingested gradually throughout the day, such as in the drinking water, than when taken as a bolus. Acute dermal and oral lethal doses of 1,2,3-trichloropropane in animals appear to be similar in magnitude, suggesting that skin contact with liquid 1,2,3-trichloropropane could be toxic for humans. Bacterial cell mutagen
1,2,4-TRIMETHYL BENZENE	CHEMWATCH 2325 1,3,5-trimethylbenzene
1,3,5-TRIMETHYL BENZENE	CHEMWATCH 12171 1,2,4-trimethylbenzene
O-XYLENE	Paternal effects recorded.
M-XYLENE	Effects on fertility, specific developmental abnormalities (craniofacial)
METHYL BROMIDE	For methyl bromide: Inhalation of 6mg/L methyl bromide for 10-20 hours or 30mg/L for 1.5 hours is lethal to humans. Methyl bromide can be highly irritating to the lining of the eyes, airways and the skin. It can be odourless at levels that are toxic. Initial acute effects include headache, dizziness, nausea or vomiting, chest and abdominal pain, and irritation of the eyes, nose and throat.
ETHYL CHLORIDE	Inhalation (mouse) LC50: 146,000 mg/m3/2h Nil reported
CHLOROMETHANE	For chloromethane: Chloromethane is a gas except under pressure, so inhalation is the main route of exposure in the workplace. It is rapidly metabolised and does not accumulate in tissues. In humans, it causes changes to the central nervous system, leading to unsteadiness and dizziness. The liver, kidney, testes, epididymis and lungs may be affected. Human cell mutagen Specific paternal effects affecting spermatogenesis, testes etc, foetotoxicity and foetolethality, specific developmental abnormalities of the musculoskeletal and cardiovascular systems recorded.
VINYL CHLORIDE	Tumours of the sense organs, vascular system, respiratory system, gastrointestinal system, skin and liver, lymphoma, paternal effects, effects on fertility, foetotoxicity, specific developmental abnormalities involving the musculoskeletal system recorded.
Method 502.2 - Volatile Organic Compounds (60 components) & CIS-1,3-DICHLOROPROPENE & TRANS-1,3-DICHLOROPROPENE	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions.
Method 502.2 - Volatile Organic Compounds (60 components) & 1,2,4-TRIMETHYL BENZENE & 1,3,5-TRIMETHYL BENZENE	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.
Method 502.2 - Volatile Organic Compounds (60 components) & CHLOROBENZENE & 1,2-DICHLOROBENZENE & 1,3-DICHLOROBENZENE & 1,4-DICHLOROBENZENE & 1,2,3-TRICHLOROBENZENE & 1,2,4-TRICHLOROBENZENE	Chlorobenzenes produce several clinical symptoms including eye and airway irritation, blood disorders, abnormal skin changes and foetal defects at levels toxic to the mother. They are well absorbed in the stomach, gut and airways, and well metabolised and excreted in the urine. Lethal doses may produce breathing failure and damage to the liver, kidneys, adrenal glands, mucous membranes, and brain.
Method 502.2 - Volatile Organic Compounds (60 components) & 1,2-DICHLOROBENZENE & 1,3-DICHLOROBENZENE & 1,4-DICHLOROBENZENE	1,2-DCB is quickly and extensively absorbed through both the gastrointestinal tract and the respiratory tract. Dermal absorption is believed to be very low. Following absorption, it is distributed throughout the body. Greatest levels have been found in the fat, kidney, and liver.
BENZENE & SEC-BUTYLBENZENE & CARBON TETRACHLORIDE & CHLOROFORM & TRANS-ACETYLENE DICHLORIDE & ETHYLBENZENE & HEXACHLOROBUTADIENE & ISOPROPYL BENZENE - CUMENE & P-CYMENE & NAPHTHALENE & STYRENE & TOLUENE & 1,2,4-TRICHLOROBENZENE & 1,1,1-TRICHLOROETHANE & 1,2,3-TRICHLOROPROPANE & 1,3,5-TRIMETHYL BENZENE & METHANOL	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.
BENZENE & 1,2-DICHLOROPROPANE & TRICHLOROETHYLENE & VINYL CHLORIDE	**WARNING:** This substance has been classified by the IARC as Group 1: **CARCINOGENIC TO HUMANS**.
BROMOCHLOROMETHANE & BROMODICHLOROMETHANE & DIBROMOCHLOROMETHANE & ETHYLENE DIBROMIDE & 1,2-DICHLOROBENZENE & 1,1-DICHLOROETHANE & 1,2-Dichloroethane & 1,3-DICHLOROPROPANE & CIS-1,3-DICHLOROPROPENE & TRANS-1,3-DICHLOROPROPENE & ISOPROPYL BENZENE - CUMENE & P-CYMENE & PROPYLBENZENE & 1,2,3-TRICHLOROBENZENE & 1,2,4-TRICHLOROBENZENE & 1,2,4-TRIMETHYL BENZENE & 1,3,5-	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.

Continued...

TRIMETHYL BENZENE & METHYL BROMIDE & TRICHLOROFLUOROMETHANE & VINYL CHLORIDE	
BROMODICHLOROMETHANE & CARBON TETRACHLORIDE & CHLOROFORM & 1,2-DIBROMO-3-CHLOROPROPANE & 1,4-DICHLOROBENZENE & ETHYLBENZENE & ISOPROPYL BENZENE - CUMENE & NAPHTHALENE & STYRENE & 1,1,1,2-TETRACHLOROETHANE & 1,1,2,2-TETRACHLOROETHANE	**WARNING:** This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.
BROMODICHLOROMETHANE & CHLOROFORM & 1,2-DIBROMO-3-CHLOROPROPANE & 1,4-DICHLOROBENZENE & ISOPROPYL BENZENE - CUMENE & 1,2,3-TRICHLOROPROPANE	Tenth Annual Report on Carcinogens: Substance anticipated to be Carcinogen [*National Toxicology Program: U.S. Dep. of Health & Human Services 2002*]
BROMOFORM & DIBROMOCHLOROMETHANE	Bromoform and dibromochloromethane are readily absorbed from the gastrointestinal tract, and may also be absorbed through the airways and skin. They cause central nervous system depression and damage the kidney and liver. Sedation and tiredness occur. It is inconclusive as to whether they cause harmful reproductive or developmental effects.
BROMOFORM & DIBROMOCHLOROMETHANE & 1,2-DICHLOROBENZENE & 1,3-DICHLOROBENZENE & VINYLIDENE CHLORIDE & HEXACHLOROBUTADIENE & 1,1,1-TRICHLOROETHANE & 1,1,2-TRICHLOROETHANE & METHYL BROMIDE & ETHYL CHLORIDE & CHLOROMETHANE	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.
SEC-BUTYLBENZENE & 1,2-DIBROMO-3-CHLOROPROPANE & 1,2-DICHLOROBENZENE & 1,2-DICHLOROPROPANE & HEXACHLOROBUTADIENE & NAPHTHALENE & TETRACHLOROETHYLENE & 1,1,2-TRICHLOROETHANE & 1,3,5-TRIMETHYL BENZENE	The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
CARBON TETRACHLORIDE & 1,2-Dichloroethane & 1,2-DICHLOROPROPANE & 1,1,1,2-TETRACHLOROETHANE & 1,1,2,2-TETRACHLOROETHANE & TETRACHLOROETHYLENE & TRICHLOROETHYLENE & VINYL CHLORIDE	Disinfection byproducts (DBPs) are formed when disinfectants such as chlorine, chloramines and ozone react with organic and inorganic matter in water. Animal studies have shown that some DBPs cause cancer. To date, several hundred DBPs have been identified. Numerous haloalkanes and haloalkenes have been tested for cancer-causing and mutation-causing activities.
CARBON TETRACHLORIDE & 1,2-DIBROMO-3-CHLOROPROPANE & CHLOROMETHANE	Exposure to the material for prolonged periods may cause physical defects in the developing embryo (teratogenesis).
1,2-DIBROMO-3-CHLOROPROPANE & ETHYLENE DIBROMIDE & 1,2-DICHLOROBENZENE & TETRACHLOROETHYLENE & 1,1,2-TRICHLOROETHANE & TRICHLOROETHYLENE & M-XYLENE	The material may cause severe 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. Repeated exposures may produce severe ulceration.
ETHYLENE DIBROMIDE & TRANS-ACETYLENE DICHLORIDE & TRICHLOROETHYLENE	The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
ETHYLENE DIBROMIDE & DIBROMOMETHANE & 1,2-DICHLOROPROPANE & ETHYLBENZENE & METHYL BROMIDE	**NOTE:** Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA.
ETHYLENE DIBROMIDE & TETRACHLOROETHYLENE & 1,2,3-TRICHLOROPROPANE	**WARNING:** This substance has been classified by the IARC as Group 2A: Probably Carcinogenic to Humans.

Continued...

CIS-ACETYLENE DICHLORIDE & TRANS-ACETYLENE DICHLORIDE	Studies have shown that trans-1,2-dichloroethylene shows low levels of acute toxicity. Animal testing did not show evidence of genetic damage or reproductive or developmental toxicity.
1,3-DICHLOROPROPANE & 2,2-DICHLOROPROPANE & 1,1-DICHLOROPROPENE & CIS-1,3-DICHLOROPROPENE & TRANS-1,3-DICHLOROPROPENE	No significant acute toxicological data identified in literature search.
ETHYLBENZENE & 1,1,1,2-TETRACHLOROETHANE & 1,1,1-TRICHLOROETHANE & 1,2,3-TRICHLOROPROPANE & M-XYLENE	The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
HEXACHLOROBUTADIENE & M-XYLENE	recorded.
ISOPROPYL BENZENE - CUMENE & P-CYMENE	For aromatic terpenes: p-cymene and cumene have low toxic potential and are excreted in the urine. At very high doses in animal testing, inco-ordination, damage to the kidneys and lung inflammation, with decrease in thymus weight, occurred. This group of substances does not seem to cause cancer, genetic damage or developmental toxicity and has low potential for reproductive toxicity.
1,1,1,2-TETRACHLOROETHANE & 1,1,2,2-TETRACHLOROETHANE	For 1,1,2,2-tetrachloroethane: A number of suicides from drinking 1,1,2,2-tetrachloroethane have been reported, with unconsciousness occurring within 1 hour and death within 3-20 hours. Autopsy showed gross congestion in the gullet, stomach, kidneys, spleen and windpipe, kidney and lungs, and gross swelling in the lungs and kidney. Deaths have also occurred after inhalation, with extreme liver destruction and fatty degeneration. In animals, exposure to concentrations of 0.1% caused death in 6 hours.
1,2,3-TRICHLOROBENZENE & 1,2,4-TRICHLOROBENZENE	Trichlorobenzenes (TCBs) are moderately toxic if swallowed or inhaled. They produce irritation of the skin, eyes and airways. Chronic exposure has caused aplastic anaemia. They are toxic to the liver, and it is currently unknown whether they cause long-term toxicity or cancer.
TRICHLOROETHYLENE & VINYL CHLORIDE	Tenth Annual Report on Carcinogens: Substance known to be Carcinogenic [*National Toxicology Program: U.S. Dep. of Health and Human Services 2002*]
1,2,3-TRICHLOROPROPANE & CHLOROMETHANE	Reproductive effector in rats
1,2,4-TRIMETHYL BENZENE & 1,3,5-TRIMETHYL BENZENE	Other Toxicity data is available for CHEMWATCH 12172 1,2,3-trimethylbenzene
DICHLORODIFLUOROMETHANE & TRICHLOROFLUOROMETHANE	CFCs are absorbed following inhalation, oral ingestion, or through skin contact. Inhalation is the most important route of entry, and exhalation is the most significant route of elimination. They can cause irregular heartbeat, airway irritation, tingling sensation, humming in the ears, apprehension, slurred speech and decreased performance in psychological tests and consciousness. There could also be reduced lung function.

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 available but does not fill the criteria for classification*
✔ *– Data available to make classification*
⊘ *– Data Not Available to make classification*

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Method 502.2 - Volatile Organic Compounds (60 components)

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
Not Available	Not Available	Not Available	Not Available	Not Available

benzene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	0.00528mg/L	4
EC50	48	Crustacea	9.23mg/L	4
EC50	72	Algae or other aquatic plants	29mg/L	2
BCF	24	Algae or other aquatic plants	10mg/L	4
EC20	4	Algae or other aquatic plants	50mg/L	4
NOEC	480	Crustacea	ca.0.17mg/L	1

bromobenzene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	5.6mg/L	4
BCF	24	Algae or other aquatic plants	~0.05mg/L	4

bromochloromethane

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE

Continued...

	NOEC	504	Crustacea	91mg/L	5

bromodichloromethane

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
Not Available	Not Available	Not Available	Not Available	Not Available

bromoform

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	7.1mg/L	4
EC50	96	Algae or other aquatic plants	12.3mg/L	4
NOEC	96	Fish	2.9mg/L	4

butylbenzene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
EC50	48	Crustacea	0.34mg/L	4
NOEC	24	Crustacea	0.2mg/L	5

sec-butylbenzene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
Not Available	Not Available	Not Available	Not Available	Not Available

tert-butylbenzene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
Not Available	Not Available	Not Available	Not Available	Not Available

carbon tetrachloride

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	10.4mg/L	4
EC50	48	Crustacea	29mg/L	1
EC50	72	Algae or other aquatic plants	0.246mg/L	2
BCF	24	Algae or other aquatic plants	0.05mg/L	4
NOEC	336	Fish	=2.5mg/L	4

chlorobenzene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	0.05mg/L	2
EC50	48	Crustacea	0.2656416mg/L	2
EC50	96	Algae or other aquatic plants	12.5mg/L	4
BCF	24	Algae or other aquatic plants	10mg/L	4
NOEC	384	Crustacea	0.32mg/L	1

chloroform

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	=3mg/L	1
EC50	48	Crustacea	=29mg/L	1
EC50	72	Algae or other aquatic plants	13.3mg/L	2
NOEC	6480	Fish	0.151mg/L	2

o-chlorotoluene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	7.8mg/L	4
EC50	96	Algae or other aquatic plants	>100mg/L	4
NOEC	504	Crustacea	0.14mg/L	4

p-chlorotoluene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	15mg/L	1
EC50	48	Crustacea	0.612mg/L	5
EC0	24	Crustacea	ca.3mg/L	1
NOEC	720	Fish	0.20330mg/L	4

dibromochloromethane

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
Not Available	Not Available	Not Available	Not Available	Not Available

Continued...

1,2-dibromo-3-chloropropane

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
Not Available	Not Available	Not Available	Not Available	Not Available

ethylene dibromide

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	1.13mg/L	2
EC50	48	Crustacea	11.61mg/L	2
EC50	72	Algae or other aquatic plants	>4.48mg/L	2
NOEC	48	Crustacea	5.24mg/L	2

dibromomethane

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
NOEC	504	Crustacea	91mg/L	5

1,2-dichlorobenzene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	1.58mg/L	2
EC50	48	Crustacea	0.66mg/L	2
EC50	96	Algae or other aquatic plants	2.2mg/L	2
BCF	24	Algae or other aquatic plants	10mg/L	4
NOEC	48	Crustacea	0.36mg/L	4

1,3-dichlorobenzene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	5.0mg/L	4
EC50	48	Crustacea	1.2mg/L	4
EC50	96	Algae or other aquatic plants	5.28mg/L	4
NOEC	384	Crustacea	=0.3mg/L	1

1,4-dichlorobenzene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	0.88mg/L	4
EC50	48	Crustacea	0.0007mg/L	4
EC50	96	Algae or other aquatic plants	1.6mg/L	4
BCF	48	Fish	0.1381mg/L	4
NOEC	336	Fish	>=0.2- <=0.23mg/L	2

1,1-dichloroethane

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
NOEC	24	Fish	100mg/L	4

1,2-Dichloroethane

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	115mg/L	4
EC50	48	Crustacea	155mg/L	1
EC50	96	Algae or other aquatic plants	166mg/L	4
NOEC	336	Fish	=1.82mg/L	4

vinylidene chloride

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	74mg/L	4
EC50	48	Crustacea	37mg/L	2
EC50	72	Algae or other aquatic plants	9.12mg/L	2
NOEC	Not Available	Crustacea	<2.4mg/L	1

cis-acetylene dichloride

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
NOEC	24	Fish	100mg/L	4

trans-acetylene dichloride

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
NOEC	48	Crustacea	<110mg/L	4

Continued...

1,2-dichloropropane

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	61mg/L	4
EC50	48	Crustacea	44.97mg/L	5
EC50	72	Algae or other aquatic plants	15.3mg/L	2
NOEC	672	Crustacea	4.09mg/L	4

1,3-dichloropropane

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	87mg/L	4
EC50	96	Algae or other aquatic plants	40mg/L	4
NOEC	96	Algae or other aquatic plants	<5.6mg/L	4

2,2-dichloropropane

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
EC50	96	Algae or other aquatic plants	39mg/L	4

1,1-dichloropropene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
Not Available	Not Available	Not Available	Not Available	Not Available

cis-1,3-dichloropropene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	1.6mg/L	2
NOEC	96	Fish	0.59mg/L	2

trans-1,3-dichloropropene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
Not Available	Not Available	Not Available	Not Available	Not Available

ethylbenzene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	0.0043mg/L	4
EC50	48	Crustacea	1.184mg/L	4
EC50	96	Algae or other aquatic plants	3.6mg/L	4
NOEC	168	Crustacea	0.96mg/L	5

hexachlorobutadiene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	0.09mg/L	4
EC50	48	Crustacea	0.9mg/L	4
BCF	24	Fish	0.0591mg/L	4
NOEC	336	Fish	=0.005mg/L	4

isopropyl benzene - cumene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	2.7mg/L	4
EC50	48	Crustacea	=0.6mg/L	1
EC50	72	Algae or other aquatic plants	1.29mg/L	2
NOEC	72	Algae or other aquatic plants	0.22mg/L	2

p-cymene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	48mg/L	4
EC50	96	Algae or other aquatic plants	22mg/L	4
NOEC	48	Crustacea	<4.6mg/L	4

Dichloromethane

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	=13.1mg/L	1
EC50	48	Crustacea	=108.5mg/L	1
EC50	72	Algae or other aquatic plants	242mg/L	4
NOEC	96	Algae or other aquatic plants	56mg/L	4

Continued...

naphthalene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	0.213mg/L	4
EC50	48	Crustacea	1.6mg/L	4
EC50	72	Algae or other aquatic plants	ca.0.4- ca.0.5mg/L	2
BCF	12	Fish	10.2mg/L	4
NOEC	48	Fish	0.012817mg/L	4

propylbenzene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	1.55mg/L	4
EC50	48	Crustacea	109mg/L	4
EC50	72	Algae or other aquatic plants	1.8mg/L	4

styrene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	4.02mg/L	4
EC50	48	Crustacea	=4.7mg/L	1
EC50	96	Algae or other aquatic plants	0.72mg/L	4
EC10	96	Algae or other aquatic plants	=0.13mg/L	1
NOEC	96	Algae or other aquatic plants	0.063mg/L	4

1,1,1,2-tetrachloroethane

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	20mg/L	4
EC50	72	Algae or other aquatic plants	48mg/L	5
NOEC	48	Crustacea	<10mg/L	4

1,1,2,2-tetrachloroethane

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	12mg/L	4
EC50	48	Crustacea	23mg/L	4
EC50	96	Algae or other aquatic plants	6.44mg/L	4
NOEC	768	Fish	1.4mg/L	4

tetrachloroethylene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	4mg/L	4
EC50	48	Crustacea	2.49mg/L	5
EC50	72	Algae or other aquatic plants	~0.2mg/L	4
BCF	240	Fish	350mg/L	4
NOEC	168	Crustacea	0.33mg/L	5

toluene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	0.0073mg/L	4
EC50	48	Crustacea	3.78mg/L	5
EC50	72	Algae or other aquatic plants	12.5mg/L	4
BCF	24	Algae or other aquatic plants	10mg/L	4
NOEC	168	Crustacea	0.74mg/L	5

1,2,3-trichlorobenzene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	0.348384mg/L	4
EC50	48	Crustacea	1.7mg/L	5
EC50	96	Algae or other aquatic plants	0.9mg/L	2
BCF	96	Fish	0.0808mg/L	4
NOEC	504	Crustacea	0.03mg/L	4

1,2,4-trichlorobenzene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	1.217mg/L	4
EC50	48	Crustacea	1.2mg/L	5
EC50	96	Algae or other aquatic plants	1.4mg/L	4

Continued...

BCF	768	Fish	0.92mg/L	4
NOEC	504	Fish	0.04mg/L	2

1,1,1-trichloroethane

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	42.3mg/L	4
EC50	48	Crustacea	11.2mg/L	4
EC50	72	Algae or other aquatic plants	0.213-0.536mg/L	2
NOEC	408	Crustacea	1.3mg/L	4

1,1,2-trichloroethane

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	40mg/L	4
EC50	48	Crustacea	=18mg/L	1
EC50	72	Algae or other aquatic plants	57.0mg/L	4
NOEC	24	Crustacea	=1mg/L	1

trichloroethylene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	3.1mg/L	4
EC50	48	Crustacea	=2.2mg/L	1
EC50	72	Algae or other aquatic plants	36.5mg/L	2
NOEC	504	Crustacea	>1.384mg/L	4

1,2,3-trichloropropane

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	27.4mg/L	4
EC50	48	Crustacea	>=2.65374- <=6.48692mg/L	2
EC50	72	Algae or other aquatic plants	49.6mg/L	2
NOEC	48	Crustacea	=4mg/L	1

1,2,4-trimethyl benzene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	7.72mg/L	2
EC50	48	Crustacea	ca.6.14mg/L	1

1,3,5-trimethyl benzene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	12.52mg/L	4
EC50	48	Crustacea	13mg/L	5
EC0	24	Crustacea	=40mg/L	4
NOEC	504	Crustacea	0.4mg/L	4

o-xylene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	0.011mg/L	4
EC50	48	Crustacea	1.39mg/L	4
EC50	72	Algae or other aquatic plants	4.7mg/L	2
NOEC	168	Crustacea	1.17mg/L	2

m-xylene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	0.0092mg/L	4
EC50	48	Crustacea	>3.4mg/L	2
EC50	72	Algae or other aquatic plants	4.9mg/L	4
NOEC	168	Crustacea	1.17mg/L	5

p-xylene

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	0.002mg/L	4
EC50	48	Crustacea	4.73mg/L	4
EC50	72	Algae or other aquatic plants	3.2mg/L	4
NOEC	73	Algae or other aquatic plants	0.44mg/L	2

Continued...

methyl bromide

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	0.0008mg/L	4
EC50	48	Crustacea	1.7mg/L	4
NOEC	72	Fish	=0.1mg/L	1

ethyl chloride

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
EC50	48	Crustacea	=58mg/L	1
EC50	72	Algae or other aquatic plants	=39mg/L	1
NOEC	72	Algae or other aquatic plants	<7.7mg/L	1

chloromethane

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	270mg/L	4

dichlorodifluoromethane

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
EC50	48	Crustacea	95mg/L	2

trichlorofluoromethane

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
EC50	48	Crustacea	=130mg/L	1

vinyl chloride

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	210mg/L	2
EC3	168	Algae or other aquatic plants	>=710mg/L	1
NOEC	96	Fish	=128mg/L	1

methanol

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	>100mg/L	4
EC50	48	Crustacea	>10000mg/L	4
EC50	96	Algae or other aquatic plants	<10000mg/L	4
BCF	24	Algae or other aquatic plants	0.05mg/L	4
EC0	168	Algae or other aquatic plants	=530mg/L	1
NOEC	72	Crustacea	0.1mg/L	4

Legend: *Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*

On the basis of the available evidence concerning properties and predicted or observed environmental fate and behavior, the material may present a danger to the structure and/ or functioning of the stratospheric ozone layer.
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.
Wastes resulting from use of the product must be disposed of on site or at approved waste sites.
For 1,2,4 - Trimethylbenzene:
Half-life (hr) air: 0.48-16;
Half-life (hr) H2O surface water: 0.24 -672;
Half-life (hr) H2O ground: 336-1344;
Half-life (hr) soil: 168-672;
Henry's Pa m3 /mol: 385 -627;
Bioaccumulation: not significant. 1,2,4-Trimethylbenzene is a volatile organic compound (VOC) substance.
Atmospheric Fate: 1,2,4-trimethylbenzene can contribute to the formation of photochemical smog in the presence of other VOCs. Degradation of 1,2,4-trimethylbenzene in the atmosphere occurs by reaction with hydroxyl radicals.
For Aromatic Substances Series:
Environmental Fate: Large, molecularly complex polycyclic aromatic hydrocarbons, or PAHs, are persistent in the environment longer than smaller PAHs.
Atmospheric Fate: PAHs are 'semi-volatile substances" which can move between the atmosphere and the Earth's surface in repeated, temperature-driven cycles of deposition and volatilization.
Terrestrial Fate: BTEX compounds have the potential to move through soil and contaminate ground water, and their vapors are highly flammable and explosive.
Ecotoxicity - Within an aromatic series, acute toxicity increases with increasing alkyl substitution on the aromatic nucleus.
Environmental Fate:
Soil: The distribution of 1,3-dichloropropene in soil compartment depends on vapor pressure, diffusion coefficient, temperature, and moisture content of the soil. Its persistence in soil is influenced by volatilization, chemical and biological degradation, photochemical degradation, and organism uptake. 1,3-dichloropropene is initially degraded by hydrolysis forming 3-chloroallyl alcohol and then will be biodegraded into 3-chloroacrolein and 3-chloroacrylic acid. Volatilization and diffusion are the most significant mechanisms for environmental dispersion and dilution of 1,3-dichloropropene.
For naphthalene:
Environmental Fate: Naphthalene may be reach surface water and soil through transportation in water or being carried by air. Most airborne naphthalene is in a vapour form and hence deposition is expected to be slow. A minimal amount of naphthalene emitted to the air is transported to other environmental components mostly by dry deposition. Naphthalene in surface water may volatililize into the atmosphere, depending on environmental condiditons.

Continued...

For Methanol: Log Kow: -0.82 to -0.66; Koc: 1; Henry's Law Constant: 4.55x10-6 atm-cu m/mole; Vapor Pressure: 127 mm Hg; BCF: < 10.
Atmospheric Fate: Methanol is expected to exist solely as a vapor in the ambient atmosphere. Vapor-phase methanol is broken down in the atmosphere by reactions with hydroxyl radicals; the half-life for this reaction in air is estimated to be 17 days.
Terrestrial Fate: Methanol is expected to have very high mobility in soil.
For Chlorobenzines:
Environmental Fate: Chlorobenzenes are removed from the environment principally by biological mechanisms; however, they are considered moderately persistent in water, air, and sediments. Residence times of 1 day in rivers and over 100 days in ground water have been reported.
Atmospheric Fate: Chemical and photolytic reactions are presumed to be the predominant pathways for chlorobenzene degradation, with residence times in the range of 13-116 days.
Aquatic Fate: Many microorganisms from sediments and sewage sludge have been shown to degrade chlorobenzenes; however, higher chlorinated compounds are less readily degraded and such degradation occurs only under aerobic conditions.
Whereas 1,2- and 1,3-dichlorobenzene (DCB) are liquids at room temperature, 1,4-DCB is a solid that sublimes readily. Sublimation rates of 1,4-DCB from consumer products were measured at 1.6x10-3 to 4.6x10-3 g/minute at temperatures ranging from 21 to 24 °C during a 19-day test period. DCBs tend to volatilise to the atmosphere from soil and water at a relatively rapid rate. Volatilisation from surface soil may be an important transport mechanism for DCBs but adsorption to soil particulates may inhibit volatilisation.
DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
benzene	HIGH (Half-life = 720 days)	LOW (Half-life = 20.88 days)
bromobenzene	HIGH	HIGH
bromochloromethane	HIGH	HIGH
bromodichloromethane	HIGH	HIGH
bromoform	HIGH (Half-life = 360 days)	HIGH (Half-life = 541.21 days)
butylbenzene	HIGH	HIGH
sec-butylbenzene	HIGH	HIGH
tert-butylbenzene	HIGH	HIGH
carbon tetrachloride	HIGH (Half-life = 360 days)	HIGH (Half-life = 6666.67 days)
chlorobenzene	HIGH (Half-life = 300 days)	LOW (Half-life = 30.38 days)
chloroform	HIGH (Half-life = 1800 days)	HIGH (Half-life = 259.63 days)
o-chlorotoluene	HIGH	HIGH
p-chlorotoluene	HIGH	HIGH
dibromochloromethane	HIGH (Half-life = 180 days)	HIGH (Half-life = 427.17 days)
1,2-dibromo-3-chloropropane	HIGH (Half-life = 360 days)	MEDIUM (Half-life = 60.79 days)
ethylene dibromide	HIGH (Half-life = 180 days)	MEDIUM (Half-life = 106.96 days)
dibromomethane	HIGH (Half-life = 560.17 days)	HIGH (Half-life = 354.58 days)
1,2-dichlorobenzene	HIGH (Half-life = 360 days)	MEDIUM (Half-life = 63.67 days)
1,3-dichlorobenzene	HIGH (Half-life = 360 days)	LOW (Half-life = 37.13 days)
1,4-dichlorobenzene	HIGH (Half-life = 360 days)	MEDIUM (Half-life = 83.58 days)
1,1-dichloroethane	HIGH (Half-life = 360 days)	MEDIUM (Half-life = 102.83 days)
1,2-Dichloroethane	HIGH (Half-life = 360 days)	MEDIUM (Half-life = 121.54 days)
vinylidene chloride	HIGH	HIGH
cis-acetylene dichloride	HIGH	HIGH
trans-acetylene dichloride	HIGH	HIGH
1,2-dichloropropane	HIGH (Half-life = 2578 days)	LOW (Half-life = 26.92 days)
1,3-dichloropropane	HIGH	HIGH
2,2-dichloropropane	HIGH	HIGH
1,1-dichloropropene	HIGH	HIGH
ethylbenzene	HIGH (Half-life = 228 days)	LOW (Half-life = 3.57 days)
hexachlorobutadiene	HIGH (Half-life = 360 days)	HIGH (Half-life = 1193.75 days)
isopropyl benzene - cumene	HIGH	HIGH
p-cymene	HIGH	HIGH
Dichloromethane	LOW (Half-life = 56 days)	HIGH (Half-life = 191 days)
naphthalene	HIGH (Half-life = 258 days)	LOW (Half-life = 1.23 days)
propylbenzene	HIGH	HIGH
styrene	HIGH (Half-life = 210 days)	LOW (Half-life = 0.3 days)
1,1,1,2-tetrachloroethane	MEDIUM (Half-life = 66.83 days)	HIGH (Half-life = 931.71 days)
1,1,2,2-tetrachloroethane	LOW (Half-life = 44 days)	MEDIUM (Half-life = 88.79 days)
tetrachloroethylene	HIGH (Half-life = 720 days)	MEDIUM (Half-life = 160.13 days)
toluene	LOW (Half-life = 28 days)	LOW (Half-life = 4.33 days)
1,2,3-trichlorobenzene	HIGH	HIGH
1,2,4-trichlorobenzene	HIGH (Half-life = 360 days)	LOW (Half-life = 53.5 days)
1,1,1-trichloroethane	HIGH (Half-life = 546 days)	HIGH (Half-life = 2247.04 days)
1,1,2-trichloroethane	HIGH (Half-life = 730 days)	MEDIUM (Half-life = 81.5 days)
trichloroethylene	HIGH (Half-life = 1653 days)	LOW (Half-life = 11.33 days)

Continued...

1,2,3-trichloropropane	HIGH (Half-life = 720 days)	LOW (Half-life = 25.54 days)
1,2,4-trimethyl benzene	LOW (Half-life = 56 days)	LOW (Half-life = 0.67 days)
1,3,5-trimethyl benzene	HIGH	HIGH
o-xylene	HIGH (Half-life = 360 days)	LOW (Half-life = 1.83 days)
m-xylene	HIGH (Half-life = 360 days)	LOW (Half-life = 1.08 days)
p-xylene	HIGH (Half-life = 360 days)	LOW (Half-life = 1.75 days)
methyl bromide	LOW (Half-life = 38 days)	HIGH (Half-life = 680.29 days)
ethyl chloride	LOW (Half-life = 56 days)	MEDIUM (Half-life = 66.83 days)
chloromethane	LOW	LOW
dichlorodifluoromethane	HIGH (Half-life = 360 days)	HIGH (Half-life = 882.5 days)
trichlorofluoromethane	HIGH (Half-life = 720 days)	HIGH (Half-life = 54166.67 days)
vinyl chloride	HIGH (Half-life = 2875 days)	LOW (Half-life = 4.04 days)
methanol	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
benzene	HIGH (BCF = 4360)
bromobenzene	LOW (BCF = 34)
bromochloromethane	LOW (LogKOW = 1.41)
bromodichloromethane	LOW (LogKOW = 2)
bromoform	LOW (BCF = 21)
butylbenzene	MEDIUM (LogKOW = 4.38)
sec-butylbenzene	HIGH (LogKOW = 4.57)
tert-butylbenzene	MEDIUM (LogKOW = 4.11)
carbon tetrachloride	LOW (BCF = 30)
chlorobenzene	LOW (BCF = 41)
chloroform	LOW (BCF = 13)
o-chlorotoluene	LOW (BCF = 112)
p-chlorotoluene	LOW (BCF = 101.6)
dibromochloromethane	LOW (LogKOW = 2.16)
1,2-dibromo-3-chloropropane	LOW (LogKOW = 2.96)
ethylene dibromide	LOW (BCF = 10)
dibromomethane	LOW (LogKOW = 1.7)
1,2-dichlorobenzene	LOW (BCF = 260)
1,3-dichlorobenzene	HIGH (BCF = 6918)
1,4-dichlorobenzene	LOW (BCF = 190)
1,1-dichloroethane	LOW (LogKOW = 1.79)
1,2-Dichloroethane	LOW (BCF = 6)
vinylidene chloride	LOW (BCF = 13)
cis-acetylene dichloride	LOW (LogKOW = 1.9808)
trans-acetylene dichloride	LOW (LogKOW = 2.09)
1,2-dichloropropane	LOW (BCF = 7)
1,3-dichloropropane	LOW (LogKOW = 2)
2,2-dichloropropane	LOW (LogKOW = 2.9163)
1,1-dichloropropene	LOW (LogKOW = 2.5281)
trans-1,3-dichloropropene	LOW (LogKOW = 2.03)
ethylbenzene	LOW (BCF = 79.43)
hexachlorobutadiene	HIGH (LogKOW = 4.78)
isopropyl benzene - cumene	LOW (BCF = 35.5)
p-cymene	MEDIUM (LogKOW = 3.9963)
Dichloromethane	LOW (BCF = 40)
naphthalene	HIGH (BCF = 18000)
propylbenzene	LOW (LogKOW = 3.69)
styrene	LOW (BCF = 77)
1,1,1,2-tetrachloroethane	LOW (LogKOW = 2.9332)
1,1,2,2-tetrachloroethane	LOW (BCF = 13.2)
tetrachloroethylene	LOW (BCF = 77.1)
toluene	LOW (BCF = 90)
1,2,3-trichlorobenzene	MEDIUM (LogKOW = 4.05)

Continued...

1,2,4-trichlorobenzene	HIGH (BCF = 4420)
1,1,1-trichloroethane	LOW (BCF = 9)
1,1,2-trichloroethane	LOW (BCF = 17)
trichloroethylene	HIGH (BCF = 5370)
1,2,3-trichloropropane	LOW (BCF = 9)
1,2,4-trimethyl benzene	LOW (BCF = 275)
1,3,5-trimethyl benzene	LOW (BCF = 342)
o-xylene	LOW (BCF = 219)
m-xylene	LOW (BCF = 1.37)
p-xylene	LOW (BCF = 2.2)
methyl bromide	LOW (LogKOW = 1.19)
ethyl chloride	LOW (LogKOW = 1.43)
chloromethane	LOW (LogKOW = 0.91)
dichlorodifluoromethane	LOW (BCF = 10)
trichlorofluoromethane	LOW (BCF = 26)
methanol	LOW (BCF = 10)

Mobility in soil

Ingredient	Mobility
benzene	LOW (KOC = 165.5)
bromobenzene	LOW (KOC = 268)
bromochloromethane	LOW (KOC = 23.74)
bromodichloromethane	LOW (KOC = 35.04)
bromoform	LOW (KOC = 35.04)
butylbenzene	LOW (KOC = 1761)
sec-butylbenzene	LOW (KOC = 1579)
tert-butylbenzene	LOW (KOC = 1181)
carbon tetrachloride	LOW (KOC = 48.64)
chlorobenzene	LOW (KOC = 268)
chloroform	LOW (KOC = 35.04)
o-chlorotoluene	LOW (KOC = 443.1)
p-chlorotoluene	LOW (KOC = 434)
dibromochloromethane	LOW (KOC = 35.04)
1,2-dibromo-3-chloropropane	LOW (KOC = 130.8)
ethylene dibromide	LOW (KOC = 43.79)
dibromomethane	LOW (KOC = 23.74)
1,2-dichlorobenzene	LOW (KOC = 443.1)
1,3-dichlorobenzene	LOW (KOC = 434)
1,4-dichlorobenzene	LOW (KOC = 434)
1,1-dichloroethane	LOW (KOC = 35.04)
1,2-Dichloroethane	LOW (KOC = 43.79)
vinylidene chloride	LOW (KOC = 35.04)
cis-acetylene dichloride	LOW (KOC = 43.79)
trans-acetylene dichloride	LOW (KOC = 43.79)
1,2-dichloropropane	LOW (KOC = 67.7)
1,3-dichloropropane	LOW (KOC = 80.77)
2,2-dichloropropane	LOW (KOC = 48.64)
1,1-dichloropropene	LOW (KOC = 67.7)
ethylbenzene	LOW (KOC = 517.8)
hexachlorobutadiene	LOW (KOC = 993.5)
isopropyl benzene - cumene	LOW (KOC = 817.2)
p-cymene	LOW (KOC = 1324)
Dichloromethane	LOW (KOC = 23.74)
naphthalene	LOW (KOC = 1837)
propylbenzene	LOW (KOC = 955)
styrene	LOW (KOC = 517.8)
1,1,1,2-tetrachloroethane	LOW (KOC = 96.63)
1,1,2,2-tetrachloroethane	LOW (KOC = 106.8)
tetrachloroethylene	LOW (KOC = 106.8)

Continued...

toluene	LOW (KOC = 268)
1,2,3-trichlorobenzene	LOW (KOC = 732.5)
1,2,4-trichlorobenzene	LOW (KOC = 717.6)
1,1,1-trichloroethane	LOW (KOC = 48.64)
1,1,2-trichloroethane	LOW (KOC = 67.7)
trichloroethylene	LOW (KOC = 67.7)
1,2,3-trichloropropane	LOW (KOC = 130.8)
1,2,4-trimethyl benzene	LOW (KOC = 717.6)
1,3,5-trimethyl benzene	LOW (KOC = 703)
o-xylene	LOW (KOC = 443.1)
m-xylene	LOW (KOC = 434)
p-xylene	LOW (KOC = 434)
methyl bromide	LOW (KOC = 14.3)
ethyl chloride	LOW (KOC = 23.74)
chloromethane	LOW (KOC = 14.3)
dichlorodifluoromethane	LOW (KOC = 48.64)
trichlorofluoromethane	LOW (KOC = 48.64)
methanol	HIGH (KOC = 1)

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. A Hierarchy of Controls seems to be common - the user should investigate: ▸ Reduction ▸ 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. ▸ **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. ▸ Recycle wherever possible or consult manufacturer for recycling options. ▸ Consult State Land Waste Authority for disposal. ▸ Bury or incinerate residue at an approved site. ▸ Recycle containers if possible, or dispose of in an authorised landfill.

SECTION 14 TRANSPORT INFORMATION

Labels Required

	
Marine Pollutant	NO
HAZCHEM	•2WE

Land transport (ADG)

UN number	1230
UN proper shipping name	METHANOL
Transport hazard class(es)	Class: 3 Subrisk: 6.1
Packing group	II
Environmental hazard	Not Applicable
Special precautions for user	Special provisions: 279 Limited quantity: 1 L

Continued...

Air transport (ICAO-IATA / DGR)

UN number	1230
UN proper shipping name	Methanol
Transport hazard class(es)	ICAO/IATA Class: 3 ICAO / IATA Subrisk: 6.1 ERG Code: 3L
Packing group	II
Environmental hazard	Not Applicable
Special precautions for user	Special provisions: A113 Cargo Only Packing Instructions: 364 Cargo Only Maximum Qty / Pack: 60 L Passenger and Cargo Packing Instructions: 352 Passenger and Cargo Maximum Qty / Pack: 1 L Passenger and Cargo Limited Quantity Packing Instructions: Y341 Passenger and Cargo Limited Maximum Qty / Pack: 1 L

Sea transport (IMDG-Code / GGVSee)

UN number	1230
UN proper shipping name	METHANOL
Transport hazard class(es)	IMDG Class: 3 IMDG Subrisk: 6.1
Packing group	II
Environmental hazard	Not Applicable
Special precautions for user	EMS Number: F-E , S-D Special provisions: 279 Limited Quantities: 1 L

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

Not Applicable

SECTION 15 REGULATORY INFORMATION

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

BENZENE(71-43-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia - New South Wales Work Health and Safety Regulation 2011 Restricted carcinogens
Australia - Northern Territories Work Health and Safety National Uniform Legislation Regulations- Restricted carcinogens
Australia - Queensland Work Health and Safety Regulation - Restricted Carcinogens
Australia - South Australia - Work Health and Safety Regulations 2012 - Restricted carcinogens
Australia - Tasmania - Work Health and Safety Regulations 2012 - Restricted carcinogens
Australia - Western Australia Carcinogenic substances to be used only for purposes approved by the Commissioner
Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix J (Part 2)
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 7
Australia Work Health and Safety Regulations 2016 - Hazardous chemicals (other than lead) requiring health monitoring
Australia Work Health and Safety Regulations 2016 - Restricted carcinogens
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

BROMOBENZENE(108-86-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)

BROMOCHLOROMETHANE(74-97-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

BROMODICHLOROMETHANE(75-27-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

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

BROMOFORM(75-25-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Continued...

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4
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
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

BUTYLBENZENE(104-51-8) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

SEC-BUTYLBENZENE(135-98-8) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

TERT-BUTYLBENZENE(98-06-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

CARBON TETRACHLORIDE(56-23-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix J (Part 2)
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 7
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

CHLOROBENZENE(108-90-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

CHLOROFORM(67-66-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 2
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4
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
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

O-CHLOROTOLUENE(95-49-8) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)

P-CHLOROTOLUENE(106-43-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)

DIBROMOCHLOROMETHANE(124-48-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

1,2-DIBROMO-3-CHLOROPROPANE(96-12-8) 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) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix J (Part 2)
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 7
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

ETHYLENE DIBROMIDE(106-93-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia - New South Wales Work Health and Safety Regulation 2011 Restricted carcinogens
Australia - Northern Territories Work Health and Safety National Uniform Legislation Regulations- Restricted carcinogens
Australia - Queensland Work Health and Safety Regulation - Restricted Carcinogens
Australia - South Australia - Work Health and Safety Regulations 2012 - Restricted carcinogens
Australia - Tasmania - Work Health and Safety Regulations 2012 - Restricted carcinogens
Australia - Western Australia Carcinogenic substances to be used only for purposes approved by the Commissioner
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix J (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 7
Australia Work Health and Safety Regulations 2016 - Restricted carcinogens
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft

DIBROMOMETHANE(74-95-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Continued...

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

1,2-DICHLOROBENZENE(95-50-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
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
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

1,3-DICHLOROBENZENE(541-73-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

1,4-DICHLOROBENZENE(106-46-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

1,1-DICHLOROETHANE(75-34-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

1,2-DICHLOROETHANE(107-06-2*) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

VINYLIDENE CHLORIDE(75-35-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft

CIS-ACETYLENE DICHLORIDE(156-59-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
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

TRANS-ACETYLENE DICHLORIDE(156-60-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6

1,2-DICHLOROPROPANE(78-87-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

1,3-DICHLOROPROPANE(142-28-9) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

2,2-DICHLOROPROPANE(594-20-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

1,1-DICHLOROPROPENE(563-58-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

CIS-1,3-DICHLOROPROPENE(10061-01-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Continued...

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix J (Part 2)
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 7

TRANS-1,3-DICHLOROPROPENE(10061-02-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix J (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 7

ETHYLBENZENE(100-41-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
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 7
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

HEXACHLOROBUTADIENE(87-68-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft

ISOPROPYL BENZENE - CUMENE(98-82-8) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

P-CYMENE(99-87-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

DICHLOROMETHANE(75-09-2*) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Part 2, Section Seven - Appendix I
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

NAPHTHALENE(91-20-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix G
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
Australia Work Health and Safety Regulations 2016 - Hazardous chemicals (other than lead) requiring health monitoring
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

PROPYLBENZENE(103-65-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)

STYRENE(100-42-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft

1,1,1,2-TETRACHLOROETHANE(630-20-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix J (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 7
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

1,1,2,2-TETRACHLOROETHANE(79-34-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Continued...

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix J (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 7
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

TETRACHLOROETHYLENE(127-18-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
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
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

TOLUENE(108-88-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Part 2, Section Seven - Appendix I
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
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 7
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

1,2,3-TRICHLOROBENZENE(87-61-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

1,2,4-TRICHLOROBENZENE(120-82-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)

1,1,1-TRICHLOROETHANE(71-55-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

1,1,2-TRICHLOROETHANE(79-00-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

TRICHLOROETHYLENE(79-01-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

1,2,3-TRICHLOROPROPANE(96-18-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

1,2,4-TRIMETHYL BENZENE(95-63-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 7

1,3,5-TRIMETHYL BENZENE(108-67-8) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 7

O-XYLENE(95-47-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Continued...

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Part 2, Section Seven - Appendix I
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 7

M-XYLENE(108-38-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Part 2, Section Seven - Appendix I
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 7

P-XYLENE(106-42-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Part 2, Section Seven - Appendix I
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6

METHYL BROMIDE(74-83-9) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix J (Part 2)
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 7
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft

ETHYL CHLORIDE(75-00-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

CHLOROMETHANE(74-87-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

DICHLORODIFLUOROMETHANE(75-71-8) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Inventory of Chemical Substances (AICS)

TRICHLOROFLUOROMETHANE(75-69-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

VINYL CHLORIDE(75-01-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia - New South Wales Work Health and Safety Regulation 2011 Restricted carcinogens
Australia - Northern Territories Work Health and Safety National Uniform Legislation Regulations- Restricted carcinogens
Australia - Queensland Work Health and Safety Regulation - Restricted Carcinogens
Australia - South Australia - Work Health and Safety Regulations 2012 - Restricted carcinogens
Australia - Tasmania - Work Health and Safety Regulations 2012 - Restricted carcinogens
Australia - Western Australia Carcinogenic substances to be used only for purposes approved by the Commissioner
Australia Exposure Standards
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix J (Part 2)
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 7
Australia Work Health and Safety Regulations 2016 - Hazardous chemicals (other than lead) requiring health monitoring
Australia Work Health and Safety Regulations 2016 - Restricted carcinogens
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft

METHANOL(67-56-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Continued...

Australia Exposure Standards	Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals	Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
Australia Inventory of Chemical Substances (AICS)	Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)	

National Inventory Status

National Inventory	Status
Australia - AICS	N (1,1-dichloropropene; dibromochloromethane; bromodichloromethane; trans-1,3-dichloropropene; 1,2-dibromo-3-chloropropane)
Canada - DSL	N (cis-acetylene dichloride; cis-1,3-dichloropropene; 1,1-dichloropropene; 1,3-dichloropropane; dibromochloromethane; bromodichloromethane; trans-1,3-dichloropropene; 1,2-dibromo-3-chloropropane; p-chlorotoluene; 1,1-dichloroethane)
Canada - NDSL	N (toluene; bromochloromethane; dibromomethane; sec-butylbenzene; ethyl chloride; chlorobenzene; 1,2,3-trichlorobenzene; naphthalene; styrene; methanol; bromobenzene; 2,2-dichloropropane; hexachlorobutadiene; 1,2-dichlorobenzene; chloromethane; 1,1,2,2-tetrachloroethane; cis-1,3-dichloropropene; bromoform; ethylbenzene; tetrachloroethylene; methyl bromide; 1,1-dichloropropene; carbon tetrachloride; 1,2-dichloropropane; Dichloromethane; 1,1,1,2-tetrachloroethane; trichlorofluoromethane; 1,3,5-trimethyl benzene; ethylene dibromide; propylbenzene; tert-butylbenzene; 1,1,1-trichloroethane; 1,1,2-trichloroethane; benzene; 1,4-dichlorobenzene; isopropyl benzene - cumene; trichloroethylene; 1,2,4-trimethyl benzene; o-xylene; vinylidene chloride; o-chlorotoluene; 1,2,4-trichlorobenzene; p-xylene; dichlorodifluoromethane; p-cymene; m-xylene; vinyl chloride; 1,2,3-trichloropropane; 1,2-Dichloroethane; butylbenzene; 1,3-dichlorobenzene; trans-acetylene dichloride; chloroform)
China - IECSC	N (2,2-dichloropropane; cis-1,3-dichloropropene; 1,1-dichloropropene; 1,1,1,2-tetrachloroethane; dibromochloromethane; bromodichloromethane; 1,2-dibromo-3-chloropropane)
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	N (2,2-dichloropropane; 1,1-dichloropropene; dibromochloromethane; bromodichloromethane)
Korea - KECI	N (cis-1,3-dichloropropene; 1,1-dichloropropene; dibromochloromethane; tert-butylbenzene; bromodichloromethane; butylbenzene)
New Zealand - NZIoC	N (2,2-dichloropropane; hexachlorobutadiene; cis-1,3-dichloropropene; 1,1-dichloropropene; 1,1,1,2-tetrachloroethane; dibromochloromethane; trans-1,3-dichloropropene; 1,2-dibromo-3-chloropropane)
Philippines - PICCS	N (2,2-dichloropropane; cis-acetylene dichloride; cis-1,3-dichloropropene; 1,1-dichloropropene; 1,1,1,2-tetrachloroethane; dibromochloromethane; bromodichloromethane; trans-1,3-dichloropropene)
USA - TSCA	N (cis-1,3-dichloropropene; 1,1-dichloropropene)
Legend:	*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)*

SECTION 16 OTHER INFORMATION

Revision Date	16/08/2018
Initial Date	15/08/2018

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
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

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end of SDS