HPM-Sealtite Primer

Chemwatch: 5280-59 Version No: 2.1.1.1

Safety Data Sheet according to WHS and ADG

requirements

Issue Date: 03/11/2017 Print Date: 20/11/2017 S.GHS.AUS.EN

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

Product Identifier

Product name	HPM-Sealtite Primer
Synonyms	Liquid polyurethane primer.
Proper shipping name	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)
Other means of identification	Not Available

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

Relevant identified uses Use according to manufacturer's directions.

Details of the supplier of the safety data sheet

Registered company name	Aldridge Corporation Australia Pty Ltd
Address	18/38 Powers Rd, Seven Hills NSW 2147
Telephone	+61 2 9674 9572
Fax	1300 662 517
Website	www.hpma.com.au
Email	sales@hpma.com.au

Emergency telephone number

Association / Organisation	CHEMTREC Australia (Sydney)
Emergency telephone numbers	+612 9037 2994 24 hours / 7 days
Other emergency telephone numbers	Not Available

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

HAZARDOUS CHEMICAL. DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

CHEMWATCH HAZARD RATINGS

		Min	Max	
Flammability	2			
Toxicity	1			0 = Minimum
Body Contact	2			1 = Low 2 = Moderate
Reactivity	1			3 = High
Chronic	3			4 = Extreme

Poisons Schedule	S5
Classification ^[1]	Flammable Liquid Category 3, Skin Corrosion/Irritation Category 2, Eye Irritation Category 2A, Carcinogenicity Category 1A, Specific target organ toxicity - single exposure Category 3 (narcotic effects), Aspiration Hazard Category 1, Acute Aquatic Hazard Category 2, Chronic Aquatic Hazard Category 2
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HSIS; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

Label elements

Hazard pictogram(s)









SIGNAL WORD DANGER

Hazard statement(s)

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H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H350	May cause cancer.
H336	May cause drowsiness or dizziness.
H304	,
	May be fatal if swallowed and enters airways.
H411	Toxic to aquatic life with long lasting effects.
AUH066	Repeated exposure may cause skin dryness and cracking

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.		
P210	Keep away from heat/sparks/open flames/hot surfaces No smoking.		
P271	Use only outdoors or in a well-ventilated area.		

Precautionary statement(s) Response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.		
P308+P313	8+P313 IF exposed or concerned: Get medical advice/attention.		
P331	Do NOT induce vomiting.		

Precautionary statement(s) Storage

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

Precautionary statement(s) Disposal

P	501	Dispose of contents/container in accordance with local regulations.
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SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
Not Available	30-60	urethane polymer
64742-95-6.	10-30	naphtha petroleum, light aromatic solvent
95-63-6	10-30	1,2,4-trimethyl benzene
108-67-8	<10	1,3,5-trimethyl benzene
98-82-8	<10	isopropyl benzene - cumene
26471-62-5	<1	toluene diisocyanate
117-81-7	<1	di-sec-octyl phthalate
9016-87-9	<1	polymeric diphenylmethane diisocyanate
4083-64-1	<1	p-toluenesulfonyl isocyanate
Not Available	<10	Ingredients determined not to be hazardous

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Description of mist aid measures				
Eye Contact	If this product comes in contact with the eyes: Wash out immediately with fresh 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. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.			
Skin Contact	If skin contact occurs: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.			
Inhalation	 If furnes 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. Following uptake by inhalation, move person to an area free from risk of further exposure. Oxygen or artificial respiration should be administered as needed. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Treatment is essentially symptomatic. A physician should be consulted. 			

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Ingestion

- If swallowed do NOT induce vomiting
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink
- Seek medical advice.
- 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 acute or short term repeated exposures to petroleum distillates or related hydrocarbons:

- Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO2 50 mm Hg) should be intubated.
- FArrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- Figure Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.
- Lavage is indicated in patients who require decontamination; ensure use of cuffed endotracheal tube in adult patients. [Ellenhorn and Barceloux: Medical Toxicology]

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

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

- Foam.
- Dry chemical powder.
- ▶ BCF (where regulations permit)

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. May be violently or explosively reactive. Wear breathing apparatus plus protective gloves. 	
Fire/Explosion Hazard	 ▶ Liquid and vapour are flammable. ▶ Moderate fire hazard when exposed to heat or flame. ▶ Vapour forms an explosive mixture with air. Combustion products include: carbon dioxide (CO2) isocyanates and minor amounts of hydrogen cyanide metal oxides (NOx) metal oxides other pyrolysis products typical of burning organic material. May emit clouds of acrid smoke 	
HAZCHEM	•3Y	

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes.
Major Spills	 Avoid contamination with water, alkalies and detergent solutions. Material reacts with water and generates gas, pressurises containers with even drum rupture resulting. DO NOT reseal container if contamination is suspected. Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling

- ▶ Containers, even those that have been emptied, may contain explosive vapours.
- ▶ Do NOT cut, drill, grind, weld or perform similar operations on or near containers.
- ▶ DO NOT allow clothing wet with material to stay in contact with skin
- Avoid all personal contact, including inhalation.
- ▶ Wear protective clothing when risk of overexposure occurs.
- Use in a well-ventilated area.

Other information

- ▶ Store in original containers in approved flammable liquid storage area.
- ► Store away from incompatible materials in a cool, dry, well-ventilated area.
- ► **DO NOT** store in pits, depressions, basements or areas where vapours may be trapped.
- for commercial quantities of isocyanates:
- ▶ Isocyanates should be stored in adequately bunded areas. Nothing else should be kept within the same bunding. Pre-polymers need not be segregated.

Conditions for safe storage, including any incompatibilities

Suitable container

Pails

Storage incompatibility

- ► Avoid reaction with oxidising agents
- ▶ Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.
- ► Reacts vigorously with alkalis

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	isopropyl benzene - cumene	Cumene	125 mg/m3 / 25 ppm	375 mg/m3 / 75 ppm	Not Available	Not Available
Australia Exposure Standards	toluene diisocyanate	Toluene-2,4-diisocyanate (TDI)	Not Available	Not Available	Not Available	Not Available
Australia Exposure Standards	di-sec-octyl phthalate	Di-sec-octyl phthalate	5 mg/m3	10 mg/m3 / - ppm	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
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
isopropyl benzene - cumene	Cumene; (Isopropyl benzene)	Not Available	Not Available	Not Available
toluene diisocyanate	Toluene diisocyanate (mixed isomers)	0.02 ppm	0.083 ppm	0.51 ppm
toluene diisocyanate	Toluene-2,4-diisocyanate; (TDI)	Not Available	Not Available	Not Available
toluene diisocyanate	Toluene-2,6-diisocyanate	Not Available	Not Available	Not Available
di-sec-octyl phthalate	Di-sec-octylphthalate	10 mg/m3	86 mg/m3	5,900 mg/m3
polymeric diphenylmethane diisocyanate	Polymethylene polyphenyl isocyanate; (Polymeric diphenylmethane diisocyanate)	0.15 mg/m3	3.6 mg/m3	22 mg/m3
p-toluenesulfonyl isocyanate	Isocyanate-bearing waste (as CNs N.O.S.)	6 mg/m3	8.3 mg/m3	50 mg/m3

Ingredient	Original IDLH	Revised IDLH
urethane polymer	Not Available	Not Available
naphtha petroleum, light aromatic solvent	Not Available	Not Available
1,2,4-trimethyl benzene	Not Available	Not Available
1,3,5-trimethyl benzene	Not Available	Not Available
isopropyl benzene - cumene	900 [LEL] ppm	Not Available
toluene diisocyanate	Not Available	Not Available
di-sec-octyl phthalate	5,000 mg/m3	Not Available
polymeric diphenylmethane diisocyanate	Not Available	Not Available
p-toluenesulfonyl isocyanate	Not Available	Not Available
Ingredients determined not to be hazardous	Not Available	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.

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Personal protection ▶ Safety glasses with side shields Eye and face protection Chemical goggles Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. Skin protection See Hand protection below ▶ 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. Hands/feet protection The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. 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. **Body protection** See Other protection below Overalls. Other protection PVC Apron. ▶ PVC protective suit may be required if exposure severe. Thermal hazards Not Available

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: Duram Multiseal

Material	CPI
BUTYL	С
NATURAL RUBBER	С
NITRILE	С
PE/EVAL/PE	С
PVA	С
SARANEX-23	С
TEFLON	С
VITON	С

^{*} 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. -

Respiratory protection

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

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	AB-AUS P2	-	AB-PAPR-AUS / Class 1 P2
up to 50 x ES	-	AB-AUS / Class 1 P2	-
up to 100 x ES	-	AB-2 P2	AB-PAPR-2 P2 ^

^ - Full-face

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

Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content. The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Coloured flammable liquid with a characteristic odour; does not mix with water.		
Physical state	Liquid	Relative density (Water = 1)	0.96
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Applicable	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	161	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	48	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Flammable.	Oxidising properties	Not Available

^{*} 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.

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Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Applicable	Gas group	Not Available
Solubility in water (g/L)	Immiscible	pH as a solution (1%)	Not Applicable
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	 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

Inhaled	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. Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual. There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhalation hazard is increased at higher temperatures. Inhaling high concentrations of mixed hydrocarbons can cause narcosis, with nausea, vomiting and lightheadedness. Low molecular weight (C2-C12) hydrocarbons can irritate mucous membranes and cause incoordination, giddiness, nausea, vertigo, confusion, headache, appetite loss, drowsiness, tremors and stupor. Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizzines slowing of reflexes, fatigue and inco-ordination.		
Ingestion	Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733) Accidental ingestion of the material may be damaging to the health of the individual. Ingestion of petroleum hydrocarbons can irritate the pharynx, oesophagus, stomach and small intestine, and cause swellings and ulcers of the mucous. Symptoms include a burning mouth and throat; larger amounts can cause nausea and vomiting, narcosis, weakness, dizziness, slow and shallow breathing abdominal swelling, unconsciousness and convulsions.		
Skin Contact	This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.		
Eye	This material can cause eye irritation and damage in some persons.		
Chronic	Studies show that inhaling this substance for over a long period (e.g. in an occupational setting) may increase the risk of cancer. Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. There is some evidence that inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population. There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general		
	TOXICITY	IRRITATION	
Duram Multiseal			

Duram Multiseal	TOXICITY	IRRITATION
	Not Available	Not Available
	TOXICITY	IRRITATION
naphtha petroleum, light	Dermal (rabbit) LD50: >1900 mg/kg ^[1]	Not Available
aromatic solvent	Inhalation (rat) LC50: >7331.62506 mg/l/8h*[2]	
	Oral (rat) LD50: >4500 mg/kg ^[1]	
	TOXICITY	IRRITATION
1,2,4-trimethyl benzene	Inhalation (rat) LC50: 18 mg/l/4hd ^[2]	Not Available
	Oral (rat) LD50: 3280 mg/kg ^[1]	

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	TOVIOLTY	IDDITATION
	TOXICITY	IRRITATION
1,3,5-trimethyl benzene	Inhalation (rat) LC50: 24 mg/l/4hd ^[2]	Eye (rabbit): 500 mg/24h mild
	Oral (rat) LD50: 3280 mg/kg ^[1]	Skin (rabbit): 20 mg/24h moderate
	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 2000 mg/kg ^[2]	Eye (rabbit): 500 mg/24h mild
isopropyl benzene - cumene	Inhalation (rat) LC50: 39 mg/l/4H ^[2]	Eye (rabbit): 86 mg mild
	Oral (rat) LD50: 1400 mg/kg ^[2]	Skin (rabbit): 10 mg/24h mild
		Skin (rabbit):100 mg/24h moderate
	TOXICITY	IRRITATION
toluene diisocyanate	Inhalation (mouse) LC50: 21.12586785 mg/l6 h ^[1]	Not Available
·	Oral (rat) LD50: >2000 mg/kg ^[1]	1 1 1
	, , , ,	1
	TOXICITY	IRRITATION
di-sec-octyl phthalate	Dermal (rabbit) LD50: 25000 mg/kg ^[2]	Eye (rabbit): 500 mg/24h mild
	Oral (rat) LD50: 30000 mg/kg ^[2]	Skin (rabbit): 500 mg/24h mild
	TOXICITY	IRRITATION
polymeric diphenylmethane	Dermal (rabbit) LD50: >9400 mg/kg ^[2]	Eye (rabbit): 100 mg - mild
diisocyanate	Inhalation (rat) LC50: 0.49 mg/l/4h ^[2]	
	Oral (rat) LD50: 43000 mg/kg ^[2]	
		1
	TOXICITY	IRRITATION
p-toluenesulfonyl isocyanate	Inhalation (rat) LC50: >159.81744 mg/l/1H ^[2]	Not Available
	Oral (rat) LD50: 2234 mg/kg ^[2]	1
NAPHTHA PETROLEUM, LIGHT AROMATIC SOLVENT	For C9 aromatics (typically trimethylbenzenes – TMBs) Acute toxicity: Animal testing shows that semi-lethal concentrations and dost from 6000 to 10000 mg/cubic metre for C9 aromatic naphtha and 18000-240 Irritation and sensitization: Results from animal testing indicate that C9 arom	natic hydrocarbon solvents are mildly to moderately irritating to the skin,
	Inhalation (rat) TCLo: 1320 ppm/6h/90D-I * [Devoe]	
1,2,4-TRIMETHYL BENZENE 1,3,5-TRIMETHYL BENZENE	CHEMWATCH 2325 1,3,5-trimethylbenzene	
ISOPROPYL BENZENE - CUMENE	damage or developmental toxicity and has low potential for reproductive toxicit Cumene is reasonably anticipated to be a human carcinogen based on suffic caused tumours at several tissue sites, including lung and liver in mice and k the relevance to humans of lung and liver tumours in experimental animals. s some tissues, based on findings of DNA damage in rodent lung and liver. Fu observed in cumene-induced lung tumours in mice, along with altered expres	ht, occurred. This group of substances does not seem to cause cancer, genetic ity. itent evidence of carcinogenicity from studies in experimental animals. Cumene idney in male rats. Several proposed mechanisms of carcinogenesis support imiliar metabolic pathways. There is also evidence that cumene is genotoxic in inthermore, mutations of the K-ras oncogene and p53 tumor-suppressor gene ission of many other genes, resemble molecular alterations found in human lung is uncertain; there is evidence that a species-specific mechanism not relevant to
TOLUENE DIISOCYANATE	The material may produce severe irritation to the eye causing pronounced inf conjunctivitis. The material may cause severe skin irritation after prolonged or repeated exp vesicles, scaling and thickening of the skin. Repeated exposures may produc	oosure and may produce on contact skin redness, swelling, the production of
DI-SEC-OCTYL PHTHALATE	Di-sec-octyl phthalate (DEHP) in animal testing has not been shown to be ac increased liver and kidney weights. In animals, DEHP does not seem to affect mutations. The material may produce peroxisome proliferation. Peroxisomes are single, animals, plants, fungi, and protozoa. Available data indicate that phthalate esters are minimally toxic by swallowing liver enlargement and induction of liver enzymes. They may also cause shrin NOTE: Substance has been shown to be mutagenic in at least one assay, or DNA. Oral (rat) NOAEL: 28.9-36.1 mg/kg/day Gastrointestinal changes, respirator lowered blood pressure, liver, endocrine turnours, foetotoxicity, paternal effect system, musculoskeletal system, cardiovascular system, urogenital system,	t fertility; however it may cause birth defects (notably of the bone) and membrane limited organelles in the cytoplasm that are found in the cells of g, inhalation and skin contact. Repeated exposure may result in weight gain, king of the testicles and other structural malformations. belongs to a family of chemicals producing damage or change to cellular y system changes, somnolence, haemorrhage, necrotic changes in GI tract, ts, maternal effects, specific developmental abnormalities (hepatobiliary
POLYMERIC DIPHENYLMETHANE DIISOCYANATE	The material may produce moderate eye irritation leading to inflammation. Ro 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.	epeated or prolonged exposure to irritants may produce conjunctivitis.

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	product		
	For p-toluenesulfonyl isocyanate: The acute semi-lethal di repeated dose, reproductive, developmental and genetic t		SI is rapidly broken down to PTSA and carbon dioxide, its
P-TOLUENESULFONYL ISOCYANATE	For p-toluenesulfonamide (PTSA): Animal testing shows that PTSA at high doses may cause accelerated degeneration of the thymus. Sufficient doses does not seem to cause mutations or genetic damage.	=	
NAPHTHA PETROLEUM, LIGHT AROMATIC SOLVENT & 1,2,4-TRIMETHYL BENZENE & 1,3,5-TRIMETHYL BENZENE	For trimethylbenzenes: Absorption of 1,2,4-trimethylbenzene occurs after exposu most important routes of absorption; whole-body toxic effegenerally leads to quick removal. The substance is fat-sol	ects from skin absorption are unlikely to o	ccur as the skin irritation caused by the chemical
1,2,4-TRIMETHYL BENZENE & 1,3,5-TRIMETHYL BENZENE & ISOPROPYL BENZENE - CUMENE & TOLUENE DIISOCYANATE & POLYMERIC DIPHENYLMETHANE DIISOCYANATE & P-TOLUENESULFONYL ISOCYANATE	Asthma-like symptoms may continue for months or even y reactive airways dysfunction syndrome (RADS) which ca RADS include the absence of previous airways disease in hours of a documented exposure to the irritant.	n occur after exposure to high levels of	highly irritating compound. Main criteria for diagnosing
1,2,4-TRIMETHYL BENZENE & 1,3,5-TRIMETHYL BENZENE	Other Toxicity data is available for		
1,2,4-TRIMETHYL BENZENE & 1,3,5-TRIMETHYL BENZENE	CHEMWATCH 12172 1,2,3-trimethylbenzene		
1,3,5-TRIMETHYL BENZENE & DI-SEC-OCTYL PHTHALATE	The material may be irritating to the eye, with prolonged conjunctivitis.	contact causing inflammation. Repeated	or prolonged exposure to irritants may produce
1,3,5-TRIMETHYL BENZENE & ISOPROPYL BENZENE - CUMENE & DI-SEC-OCTYL PHTHALATE	The material may cause skin irritation after prolonged or r scaling and thickening of the skin.	epeated exposure and may produce on o	contact skin redness, swelling, the production of vesicles,
ISOPROPYL BENZENE - CUMENE & DI-SEC-OCTYL PHTHALATE	Tenth Annual Report on Carcinogens: Substance anticipa [National Toxicology Program: U.S. Dep. of Health & Hun		
ISOPROPYL BENZENE - CUMENE & DI-SEC-OCTYL PHTHALATE	WARNING: This substance has been classified by the l.	ARC as Group 2B: Possibly Carcinogeni	ic to Humans.
TOLUENE DIISOCYANATE & POLYMERIC DIPHENYLMETHANE DIISOCYANATE	The following information refers to contact allergens as a Contact allergies quickly manifest themselves as contact involves a cell-mediated (T lymphocytes) immune reaction	eczema, more rarely as urticaria or Quin	
TOLUENE DIISOCYANATE & POLYMERIC DIPHENYLMETHANE DIISOCYANATE & P-TOLUENESULFONYL ISOCYANATE	Allergic reactions involving the respiratory tract are usual the allergen and period of exposure often determine the se other irritants may aggravate symptoms.	•	odies and allergens and occur rapidly. Allergic potential of e genetically more prone than others, and exposure to
TOLUENE DIISOCYANATE & POLYMERIC DIPHENYLMETHANE DIISOCYANATE & P-TOLUENESULFONYL ISOCYANATE	Attention should be paid to atopic diathesis, characterisec	l by increased susceptibility to nasal infla	mmation, asthma and eczema.
TOLUENE DIISOCYANATE & POLYMERIC DIPHENYLMETHANE DIISOCYANATE & P-TOLUENESULFONYL ISOCYANATE	Exogenous allergic alveolitis is induced essentially by alle be involved. Such allergy is of the delayed type with onset		IgG type; cell-mediated reactions (T lymphocytes) may
TOLUENE DIISOCYANATE & POLYMERIC DIPHENYLMETHANE DIISOCYANATE & P-TOLUENESULFONYL ISOCYANATE	Isocyanate vapours are irritating to the airways and can of fluid in the lungs. Nervous system symptoms that may occparanoia.		
TOLUENE DIISOCYANATE & POLYMERIC DIPHENYLMETHANE DIISOCYANATE	Aromatic and aliphatic diisocyanates may cause airway to several members of diisocyanates tested on experimental outcome.		
Acute Toxicity	0	Carcinogenicity	~
Skin Irritation/Corrosion	✓	Reproductivity	0
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	v
Respiratory or Skin sensitisation	0	STOT - Repeated Exposure	0
Mutagenicity	0	Aspiration Hazard	✓
			Poto available but does not fill the critoria for elegationian

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✓ – Data available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURC
Duram Multiseal	Not Available	Not Available	Not Available	Not Available	Not Available
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURC
	EC50	48	Crustacea	=6.14mg/L	1
naphtha petroleum, light aromatic solvent	EC50	72	Algae or other aquatic plants	3.29mg/L	1
aromatic solvent	EC10	72	Algae or other aquatic plants	1.13mg/L	1
	NOEC	72	Algae or other aquatic plants	=1mg/L	1
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURC
1,2,4-trimethyl benzene	LC50	96	Fish	7.72mg/L	2
	EC50	48	Crustacea	ca.6.14mg/L	1
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURC
	LC50	96	Fish	12.52mg/L	4
1,3,5-trimethyl benzene	EC50	48	Crustacea	13mg/L	5
	EC0	24	Crustacea	=40mg/L	4
	NOEC	504	Crustacea	0.4mg/L	4
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURC
	LC50	96	Fish	2.7mg/L	4
isopropyl benzene - cumene	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
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURC
	LC50	96	Fish	>=100mg/L	1
toluene diisocyanate	EC50	48	Crustacea	=12.5mg/L	1
	EC50	96	Algae or other aquatic plants	=3230mg/L	1
	NOEC	504	Crustacea	>=0.5mg/L	1
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURC
	LC50	96	Fish	>0.16mg/L	4
	EC50	48	Crustacea	0.133mg/L	4
di-sec-octyl phthalate	EC50	96	Algae or other aquatic plants	>0.1mg/L	4
	BCF	24	Fish	50mg/L	4
	EC60	504	Crustacea	=0.003mg/L	1
	NOEC	2400	Fish	=0.005mg/L	1
and the state of	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURC
polymeric diphenylmethane diisocyanate	Not Available	Not Available	Not Available	Not Available	Not Available
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURC
o-toluenesulfonyl isocyanate	Not Available	Not Available	Not Available	Not Available	Not Available

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

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. **DO NOT** discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
1,2,4-trimethyl benzene	LOW (Half-life = 56 days)	LOW (Half-life = 0.67 days)
1,3,5-trimethyl benzene	HIGH	HIGH

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isopropyl benzene - cumene	HIGH	HIGH
toluene diisocyanate	LOW (Half-life = 1 days)	LOW (Half-life = 0.13 days)
di-sec-octyl phthalate	HIGH (Half-life = 389 days)	LOW (Half-life = 1.21 days)
p-toluenesulfonyl isocyanate	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
1,2,4-trimethyl benzene	LOW (BCF = 275)
1,3,5-trimethyl benzene	LOW (BCF = 342)
isopropyl benzene - cumene	LOW (BCF = 35.5)
toluene diisocyanate	LOW (BCF = 5)
di-sec-octyl phthalate	HIGH (BCF = 24500)
p-toluenesulfonyl isocyanate	LOW (LogKOW = 2.3424)

Mobility in soil

Ingredient	Mobility
1,2,4-trimethyl benzene	LOW (KOC = 717.6)
1,3,5-trimethyl benzene	LOW (KOC = 703)
isopropyl benzene - cumene	LOW (KOC = 817.2)
toluene diisocyanate	LOW (KOC = 9114)
di-sec-octyl phthalate	LOW (KOC = 165400)
p-toluenesulfonyl isocyanate	LOW (KOC = 882.1)

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.
- 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.
- ► Recycle wherever possible.
- Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
- Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus (after admixture with suitable combustible material).

SECTION 14 TRANSPORT INFORMATION

Labels Required



Marine Pollutant



HAZCHEM

•3Y

Land transport (ADG)

UN number	1263
UN proper shipping name	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)
Transport hazard class(es)	Class 3 Subrisk Not Applicable
Packing group	III
Environmental hazard	Environmentally hazardous

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	1			
	Special provisions	163 223 367		
Special precautions for user	Limited quantity	5 L		
Air transport (ICAO-IATA / DGF	R)			
UN number	1263			
UN proper shipping name	Paint (including paint, la or reducing compounds)		oolish, liquid filler and liquid lacquer base); Paint related material (including paint thinning	
	ICAO/IATA Class	3		
Transport hazard class(es)	ICAO / IATA Subrisk	Not Applicable		
	ERG Code	3L		
Packing group	III			
Environmental hazard	Environmentally hazardo	us		
	Special provisions		A3 A72 A192	
	Cargo Only Packing Ir	nstructions	366	
	Cargo Only Maximum		220 L	
Special precautions for user	Passenger and Cargo	Packing Instructions	355	
	Passenger and Cargo	Maximum Qty / Pack	60 L	
	Passenger and Cargo	Limited Quantity Packing Instructions	Y344	
	Passenger and Cargo	Passenger and Cargo Limited Maximum Qty / Pack 10 L		
Sea transport (IMDG-Code / G	GVSee)			
UN number	1263			
UN proper shipping name	PAINT (including paint, I paint thinning or reducing		polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including	
	IMDG Class 3			
Transport hazard class(es)	IMDG Subrisk No	t Applicable		
Packing group	III			
Environmental hazard	Marine Pollutant			
	EMS Number	F-E , S-E		
Special precautions for user	Special provisions	163 223 367 955		
, ,	Limited Quantities	5L		
Transport in bulk according t	o Annov II of MADD	OL and the IPC and a		

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 fo	r the substance	or mixture
Jaiety, meanth and environmental	regulations	, iegisiation	specific to	i tile substance	OI IIIIXtuie

NAPHTHA PETROLEUM, LIGHT AROMATIC SOLVENT(64742-95-6.) IS FOUND ON THE F	OLLOWING REGULATORY LISTS
Australia Hazardous Substances Information System - Consolidated Lists	Australia Inventory of Chemical Substances (AICS)
\parallel 1,2,4-trimethyl benzene(95-63-6) is found on the following regulatory L	ISTS
1,2,4-TRIMETHYL BENZENE(95-63-6) IS FOUND ON THE FOLLOWING REGULATORY L Australia Hazardous Substances Information System - Consolidated Lists	Australia Inventory of Chemical Substances (AICS)

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

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

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

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

Australia Hazardous Substances Information System - Consolidated Lists

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

TOLUENE DIISOCYANATE(26471-62-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards	Australia Work Health and Safety Regulations 2016 - Hazardous chemicals (other than lead)
Australia Hazardous Substances Information System - Consolidated Lists	requiring health monitoring
Australia Inventory of Chemical Substances (AICS)	International Agency for Research on Cancer (IARC) - Agents Classified by the IARC
	Monographs

DI-SEC-OCTYL PHTHALATE(117-81-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

Australia Hazardous Substances Information System - Consolidated Lists

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

Monographs

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Australia Exposure Standards	Australia Work Health and Safety Regulations 2016 - Hazardous chemicals (other than lead)
Australia Hazardous Substances Information System - Consolidated Lists	requiring health monitoring
Australia Inventory of Chemical Substances (AICS)	International Agency for Research on Cancer (IARC) - Agents Classified by the IARC
	Monographs

P-TOLUENESULFONYL ISOCYANATE(4083-64-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards	Australia Inventory of Chemical Substances (AICS)
Australia Hazardous Substances Information System - Consolidated Lists	Australia Work Health and Safety Regulations 2016 - Hazardous chemicals (other than lead)
	requiring health monitoring

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (toluene diisocyanate; di-sec-octyl phthalate; naphtha petroleum, light aromatic solvent; 1,3,5-trimethyl benzene; isopropyl benzene - cumene; 1,2,4-trimethyl benzene; p-toluenesulfonyl isocyanate; polymeric diphenylmethane diisocyanate)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	N (polymeric diphenylmethane diisocyanate)
Japan - ENCS	Y
Korea - KECI	Y
New Zealand - NZIoC	Υ
Philippines - PICCS	Y
USA - TSCA	Υ
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

Other information

Ingredients with multiple cas numbers

Name	CAS No
naphtha petroleum, light aromatic solvent	64742-95-6., 25550-14-5.
toluene diisocyanate	26471-62-5, 584-84-9, 91-08-7, 1321-38-6

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.

Definitions and abbreviations

 ${\sf PC-TWA: Permissible \ Concentration-Time \ Weighted \ Average}$

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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