Mungo MIT-SP, Comp. A Hobson Engineering Co Pty Ltd

Chemwatch: 5252-91 Version No: 6.1

Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements

Chemwatch Hazard Alert Code: 3

Issue Date: **26/05/2022** Print Date: **26/05/2022** L.GHS.AUS.EN.E

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

Product Identifier				
Product name	Mungo MIT-SP, Comp. A			
Chemical Name	Not Applicable			
Synonyms	Not Available			
Chemical formula	Not Applicable			
Other means of identification	Not Available			

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

Relevant identified uses	Used in conjunction with curing agent Comp. B to form mounting material.
Neievani identined uses	Use according to manufacturer's directions

Details of the supplier of the safety data sheet

Registered company name	Hobson Engineering Co Pty Ltd		
Address	Clay Place Eastern Creek NSW 2176 Australia		
Telephone	2 8818 0222		
Fax	61 2 9620 1850		
Website	www.hobson.com.au		
Email	info@hobson.com.au		

Emergency telephone number

Association / Organisation	CHEMWATCH EMERGENCY RESPONSE		
Emergency telephone numbers	+61 1800 951 288		
Other emergency telephone numbers	+61 3 9573 3188		

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

SECTION 2 Hazards identification

Classification of the substance or mixture

Poisons Schedule	Not Applicable
Classification ^[1]	Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 2, Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 2A, Carcinogenicity Category 1B, Specific Target Organ Toxicity - Repeated Exposure Category 2, Hazardous to the Aquatic Environment Long-Term Hazard Category 3
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

Label elements

Hazard pictogram(s)





Signal word Danger

Hazard statement(s)

H302	Harmful if swallowed.			
H315	auses skin irritation.			
H317	May cause an allergic skin reaction.			
H319	uses serious eye irritation.			
H350	May cause cancer.			
H373	May cause damage to organs through prolonged or repeated exposure.			
H412	Harmful to aquatic life with long lasting effects.			

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Precautionary statement(s) Prevention

P201	Obtain special instructions before use.		
P260	o not breathe mist/vapours/spray.		
P280	Wear protective gloves, protective clothing, eye protection and face protection.		
P264	ash all exposed external body areas thoroughly after handling.		
P270	Oo not eat, drink or smoke when using this product.		
P273	Avoid release to the environment.		
P272	Contaminated work clothing should not be allowed out of the workplace.		

Precautionary statement(s) Response

P308+P313	IF exposed or concerned: Get medical advice/ attention.				
P302+P352	IF ON SKIN: Wash with plenty of water and soap.				
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.				
P314	et medical advice/attention if you feel unwell.				
P333+P313	skin irritation or rash occurs: Get medical advice/attention.				
P337+P313	eye irritation persists: Get medical advice/attention.				
P362+P364	Take off contaminated clothing and wash it before reuse.				
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider if you feel unwell.				
P330	Rinse mouth.				

Precautionary statement(s) Storage

P405 Store locked up.

Precautionary statement(s) Disposal

P501 Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

Not Applicable

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name			
868-77-9	5-15	2-hydroxyethyl methacrylate			
1321-45-5	1-10	methylstyrene, mixed isomers			
97-90-5	1-5	ethylene glycol dimethacrylate			
923-26-2	1-5	2-hydroxypropyl methacrylate			
38668-48-3	0.1-1 dipropoxy-p-toluidine				
Not Available	balance Ingredients determined not to be hazardous				
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L * EU IOELVs available				

SECTION 4 First aid measures

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Description of first aid measur	es
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 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.

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.

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- Seek medical advice
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically

SECTION 5 Firefighting measures

Extinguishing media

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

Special hazards arising from the substrate or mixture

Fire Incompatibility F 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 breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- Avoid spraying water onto liquid pools.

► Combustible.

- ▶ Do not approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.

Fire/Explosion Hazard

- ▶ 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).
- May emit acrid smoke.
- Mists containing combustible materials may be explosive.

Decomposes on heating and produces toxic fumes of: carbon dioxide (CO2) nitrogen oxides (NOx) other pyrolysis products typical of burning organic material

HAZCHEM

Not Applicable

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

	Clean up all spills immediately.
	Avoid contact with skin and eyes.
Minor Spills	Wear impervious gloves and safety goggles.
Minor Spills	► Trowel up/scrape up.
	k Black colling to a factor of the colling to the c

- Place spilled material in clean, dry, sealed container.
- Flush spill area with water
- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- Stop leak if safe to do so.
- **Major Spills**
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Neutralise/decontaminate residue (see Section 13 for specific agent).
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
- If contamination of drains or waterways occurs, advise emergency services.

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

SECTION 7 Handling and storage

Precautions for safe handling

- Avoid all personal contact, including inhalation.
 - Wear protective clothing when risk of exposure occurs.
- Safe handling Use in a well-ventilated area.
 - Prevent concentration in hollows and sumps.

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DO NOT enter confined spaces until atmosphere has been checked.
 Avoid smoking, naked lights or ignition sources.
 Avoid contact with incompatible materials.
 When handling, DO NOT eat, drink or smoke.
 Keep containers securely sealed when not in use.
 Avoid physical damage to containers.

- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
 - Use good occupational work practice.
- Observe manufacturer's storage and handling recommendations contained within this SDS.
- ▶ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.

Store in original containers.

- ► Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- ▶ Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- ▶ Observe manufacturer's storage and handling recommendations contained within this SDS.

Conditions for safe storage, including any incompatibilities

Suitable container

Storage incompatibility

Other information

- ▶ Polyethylene or polypropylene container.
- Packing as recommended by manufacturer
- Check all containers are clearly labelled and free from leaks.

for multifunctional acrylates:

- Avoid exposure to free radical initiators (peroxides, persulfates), iron, rust, oxidisers, and strong acids and strong bases.
- Avoid heat, flame, sunlight, X-rays or ultra-violet radiation.
- Storage beyond expiration date, may initiate polymerisation. Polymerisation of large quantities may be violent (even explosive)
- ▶ Stable under controlled storage conditions provided material contains adequate stabiliser / polymerisation inhibitor.
- ► Bulk storages may have special storage requirements
- WARNING: Gradual decomposition in strong, sealed containers may lead to a large pressure build-up and subsequent explosion. Rapid and violent polymerisation possible at temperatures above 32 deg c.

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	methylstyrene, mixed isomers	Vinyl toluene	50 ppm / 242 mg/m3	483 mg/m3 / 100 ppm	Not Available	Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
2-hydroxyethyl methacrylate	1.9 mg/m3	21 mg/m3	1,000 mg/m3
ethylene glycol dimethacrylate	9.9 mg/m3	110 mg/m3	650 mg/m3

Ingredient	Original IDLH	Revised IDLH
2-hydroxyethyl methacrylate	Not Available	Not Available
methylstyrene, mixed isomers	400 ppm	Not Available
ethylene glycol dimethacrylate	Not Available	Not Available
2-hydroxypropyl methacrylate	Not Available	Not Available
dipropoxy-p-toluidine	Not Available	Not Available

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit	
2-hydroxyethyl methacrylate	E	≤ 0.1 ppm	
ethylene glycol dimethacrylate	E	≤ 0.1 ppm	
2-hydroxypropyl methacrylate	E	≤ 0.1 ppm	
dipropoxy-p-toluidine	E	≤ 0.01 mg/m³	
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the		

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Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.

MATERIAL DATA

as vinyl toluene (syn: methylstyrene)

IDLH Level: 5000 ppm

The toxicological properties of vinyltoluene are similar to those of styrene and the TLV- TWA and STEL are analogous. The limits are thought to be protective against mucous membrane and ocular irritation and should reduce the complaints of objectionable odour. Given that axonal degeneration found in rats inhaling vinyltoluene is more significant than in rats inhaling comparable concentrations of styrene, and that neurological changes are more prominent, the limits are the subject of review.

Human subjects show ocular and upper respiratory tract irritation at 400 ppm, complain of a strong objectionable odour at 300 ppm and a strong but tolerable odour at 200 ppm. At 50 ppm, the odour is detectable and may become disagreeable, but does not produce irritation of the mucous membranes.

CEL TWA: 1 mg/m3 [compare WEEL-TWA* for multifunctional acrylates (MFAs)]

(CEL = Chemwatch Exposure Limit)

Exposure to MFAs has been reported to cause contact dermatitis in humans and serious eye injury in laboratory animals. Exposure to some MFA-resin containing aerosols has also been reported to cause dermatitis. As no assessment of the possible effects of long-term exposure to aerosols was found, a conservative Workplace Environmental Exposure Level (WEEL) was suggested by the American Industrial Hygiene Association (AIHA).

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NOTE D: Certain substances which are susceptible to spontaneous polymerisation or decomposition are generally placed on the market in a stabilised form. It is in this form that they are listed on Annex I

When they are placed on the market in a non-stabilised form, the label must state the name of the substance followed by the words "non-stabilised" European Union (EU) List of harmonised classification and labelling hazardous substances, Table 3.1, Annex VI, Regulation (EC) No 1272/2008 (CLP) - up to the latest ATP

Exposure controls

Appropriate engineering controls

Use in a well-ventilated area

General exhaust is adequate under normal operating conditions.

Refer also to protective measures for the other component used with the product. Read both SDS before using; store and attach SDS together.

Personal protection









Eye and face protection

Safety glasses with side shields; or as required,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. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

Skin protection

See Hand protection below

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.

	· · · · · · · · · · · · · · · · · · ·	belts and watch-bands should be removed and destroyed. only recommended gloves - using the wrong gloves may increase the risk:
	Exposure condition Short time use; (few minutes less than 0.5 hour) Little physical stress	Use of thin nitrile rubber gloves: Nitrile rubber (0.1 mm) Excellent tactibility ("feel"), powder-free Disposable Inexpensive Give adequate protection to low molecular weigh acrylic monomers
nds/feet protection	Exposure condition Medium time use; less than 4 hours Physical stress (opening drums, using tools, etc.)	Use of medium thick nitrile rubber gloves Nitrile rubber, NRL (latex) free; <0.45 mm Moderate tactibility ("feel"), powder-free Disposable Moderate price Gives adequate protection for most acrylates up to 4 hours Do NOT give adequate protection to low molecular weight monomers at exposures longer than 1 hour
	Exposure condition Long time Cleaning operations	Nitrile rubber, NRL (latex) free; >0.56 mm low tactibility ("feel"), powder free High price Gives adequate protection for most acrylates in combination with commonly used solvents up to 8 hours Do NOT give adequate protection to low molecular weight monomers at exposures longer than 1 hour Avoid use of ketones and acetates in wash-up solutions.
	ketones, use laminated multilayer gloves.	(for example in long term handling of acrylates containing high levels of acetates and/ or EB Acrylates Third edition, 231 October 2007 - Cefic
Body protection	See Other protection below	
Other protection	Overalls. P.V.C apron. Barrier cream.	

Respiratory protection

Hand

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

Skin cleansing cream.Eve wash unit.

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 5 x ES	AK-AUS / Class 1 P3	-	AK-PAPR-AUS / Class 1 P3
up to 25 x ES	Air-line*	AK-2 P3	AK-PAPR-2 P3
up to 50 x ES	-	AK-3 P3	-
50+ x ES	-	Air-line**	-

^ - Full-fac

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

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SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Light beige paste with characteristic odour; insoluble in water.		
Physical state	Non Slump Paste	Relative density (Water = 1)	Not Available
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 Applicable
Initial boiling point and boiling range (°C)	Not Applicable	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Applicable	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	9.5	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	0.9	Volatile Component (%vol)	Not Applicable
Vapour pressure (kPa)	Not Applicable	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (Not Available%)	Not Applicable
Vapour density (Air = 1)	Not Applicable	VOC g/L	Not Applicable

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

Information on toxicological effects

iormation on toxicological e	HECLS
Inhaled	Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.
Ingestion	Accidental ingestion of the material may be damaging to the health of the individual. Ingestion may result in nausea, abdominal irritation, pain and vomiting
Skin Contact	Evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis. The material may accentuate any pre-existing dermatitis condition
Еуе	Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.
Chronic	Practical experience shows that skin contact with the material is capable either of inducing a sensitisation reaction in a substantial number of individuals, and/or of producing a positive response in experimental animals. Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological, irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even to tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance who are likely to become hyper-responsive. Substances than can cuase occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing air-way hyper-responsiveness. The latter substances are not classified as asthmagens or respiratory sensitisers. Wherever it is reasonably practicable, exposure to substances that can cuase occupational asthma should be prevented. Where this is not possible the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance. Sensitisation may give severe responses to very low levels of exposure, in situations where exposure may occur.

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	TOXICITY	IRRITATION	
Mungo MIT-SP, Comp. A	Inhalation (Rat) LC50: >100000 mg/m3/h ^[2]	Not Available	
	Oral (Rat) LD50: >5000 mg/kg ^[2]		
	TOXICITY	IRRITATION	
	Dermal (rabbit) LD50: >3000 mg/kg ^[2]	Eye (rabbit): SEVERE *	
2-hydroxyethyl methacrylate	Oral (Mouse) LD50; 3275 mg/kg ^[2]	Eye: adverse effect observed (irritating) ^[1]	
		Skin (rabbit): non-irritating*	
		Skin: no adverse effect observed (not irritating) ^[1]	
	TOXICITY	IRRITATION	
mathylatyrana miyad isamara	Inhalation(Mouse) LC50; 3.02 mg/L4h ^[2]	Eye (rabbit): 90 mg - mild	
methylstyrene, mixed isomers	Oral (Rat) LD50; 2255 mg/kg ^[2]	Skin (rabbit): 100% moderate	
	oral (rail) ED50, 2255 mg/kg·	Olim (abbit). 10070 meastate	
	TOXICITY	IRRITATION	
thylene glycol dimethacrylate	dermal (rat) LD50: >2000 mg/kg ^[1]	Eye: no adverse effect observed (not irritating) ^[1]	
	Oral (Mouse) LD50; 2000 mg/kg ^[2]	Skin: no adverse effect observed (not irritating) ^[1]	
	TOXICITY	IRRITATION	
2-hydroxypropyl methacrylate	Oral (Rat) LD50; 5050 mg/kg ^[2]	Eye: adverse effect observed (irritating) ^[1]	
z nyaroxypropyr momaoryiato		Skin: no adverse effect observed (not irritating) ^[1]	
	TOXICITY	IRRITATION	
dipropoxy-p-toluidine	dermal (rat) LD50: >2000 mg/kg ^[1]	Eye (rabbit): slight* * = BAYER	
	Oral (Rat) LD50; >25<200 mg/kg ^[1]	Skin (rabbit): 4h - Non irrit.*	
2-HYDROXYETHYL METHACRYLATE	Dermal (rabbit): >5000 mg/kg* Effects persist beyond 21 da	ıys	
METHYLSTYRENE, MIXED ISOMERS	Olfaction and eye effects recorded The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis. Histologically there may be intercellular oedema of the		
2-HYDROXYPROPYL METHACRYLATE	spongy layer (spongiosis) and intracellular oedema of the epidermis. for CAS 963-26-2 2-hydroxypropyl methacrylate NOTE: Allergic contact dermatitis is reported following exposure of guinea pigs (mild) and humans (severe). for CAS 27813-02-1 1-hydroxypropyl methacrylate		
Mungo MIT-SP, Comp. A & 2-HYDROXYETHYL METHACRYLATE & ETHYLENE GLYCOL DIMETHACRYLATE & 2-HYDROXYPROPYL METHACRYLATE	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. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.		
Mungo MIT-SP, Comp. A & ETHYLENE GLYCOL DIMETHACRYLATE	UV (ultraviolet)/ EB (electron beam) acrylates are generally of low toxicity UV/EB acrylates are divided into two groups; "stenomeric" and "eurymeric" acrylates. The first group consists of well-defined acrylates which can be described by a simple idealised chemical; they are low molecular weight species with a very narrow weight distribution profile. The eurymeric acrylates cannot be described by an idealised structure and may differ fundamentally between various suppliers; they are of relatively high molecular weigh and possess a wide weight distribution. Stenomeric acrylates are usually more hazardous than the eurymeric substances. Stenomeric acrylates are also well defined which allows comparison and exchange of toxicity data - this allows more accurate classification. The stenomerics cannot be classified as a group; they exhibit substantial variation.		
Mungo MIT-SP, Comp. A & METHYLSTYRENE, MIXED ISOMERS	No significant acute toxicological data identified in literature search.		
Mungo MIT-SP, Comp. A & ETHYLENE GLYCOL DIMETHACRYLATE & 2-HYDROXYPROPYL METHACRYLATE	Based on the available oncogenicity data and without a better understanding of the carcinogenic mechanism the Health and Environmental Review Division (HERD), Office of Toxic Substances (OTS), of the US EPA previously concluded that all chemicals that contain the acrylate or methacrylate moiety (CH2=CHCOO or CH2=C(CH3)COO) should be considered to be a carcinogenic hazard unless shown otherwise by adequate testing. This position has now been revised and acrylates and methacrylates are no longer <i>de facto</i> carcinogens. Where no "official" classification for acrylates and methacrylates exists, there has been cautious attempts to create classifications in the absence of contrary evidence. For example Monalkyl or monoarylesters of acrylic acids should be classified as R36/37/38 and R51/53		
2-HYDROXYETHYL METHACRYLATE & ETHYLENE GLYCOL DIMETHACRYLATE &	Monoalkyl or monoaryl esters of methacrylic acid should be classified as R36/37/38 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		

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2-HYDROXYPROPYL **METHACRYLATE**

airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.

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 either not available or does not fill the criteria for classification

- Data available to make classification

SECTION 12 Ecological information

Toxicity

	Endpoint	Test Duration (hr)	Species	Value	Source
Mungo MIT-SP, Comp. A	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	504h	Crustacea	24.1mg/l	2
2-hydroxyethyl methacrylate	LC50	96h	Fish	>100mg/l	2
	EC50	72h	Algae or other aquatic plants	345mg/l	2
	EC50	48h	Crustacea	210mg/l	2
	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	504h	Crustacea	0.07mg/l	2
	EC50	96h	Algae or other aquatic plants	4.122mg/l	2
methylstyrene, mixed isomers	LC50	96h	Fish	5.2mg/l	2
	EC50	72h	Algae or other aquatic plants	0.319mg/l	2
	EC50	48h	Crustacea	>1<10mg/l	4
	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	96h	Algae or other aquatic plants	0.804mg/l	2
	LC50	96h	Fish	15.95mg/l	2
thylene glycol dimethacrylate	EC50	72h	Algae or other aquatic plants	17.3mg/l	2
	EC50	48h	Crustacea	44.9mg/l	2
	EC50	96h	Algae or other aquatic plants	10.1mg/l	2
	Endpoint	Test Duration (hr)	Species	Value	Source
	LC50	96h	Fish	833mg/l	2
2-hydroxypropyl methacrylate	EC50	72h	Algae or other aquatic plants	>97.2mg/l	2
	EC50	48h	Crustacea	>143mg/l	2
	NOEC(ECx)	504h	Crustacea	45.2mg/l	2
	Endpoint	Test Duration (hr)	Species	Value	Source
	LC50	96h	Fish	17mg/l	2
dipropoxy-p-toluidine	EC50	72h	Algae or other aquatic plants	245mg/l	2
	EC50	48h	Crustacea	28.8mg/l	2
	EC50(ECx)	48h	Crustacea	28.8mg/l	2

- Bioconcentration Data 8. Vendor Data

Harmful 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
2-hydroxyethyl methacrylate	LOW	LOW
ethylene glycol dimethacrylate	LOW	LOW
2-hydroxypropyl methacrylate	LOW	LOW

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Ingredient	Persistence: Water/Soil	Persistence: Air
dipropoxy-p-toluidine	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
2-hydroxyethyl methacrylate	LOW (BCF = 1.54)
methylstyrene, mixed isomers	LOW (BCF = 110)
ethylene glycol dimethacrylate	LOW (LogKOW = 2.2088)
2-hydroxypropyl methacrylate	LOW (BCF = 3.2)
dipropoxy-p-toluidine	LOW (LogKOW = 2.0121)

Mobility in soil

Ingredient	Mobility
2-hydroxyethyl methacrylate	HIGH (KOC = 1.043)
ethylene glycol dimethacrylate	LOW (KOC = 27.15)
2-hydroxypropyl methacrylate	LOW (KOC = 10)
dipropoxy-p-toluidine	LOW (KOC = 10)

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal

- ▶ 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	Not Applicable

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

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

Not Applicable

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

Product name	Group
2-hydroxyethyl methacrylate	Not Available
methylstyrene, mixed isomers	Not Available
ethylene glycol dimethacrylate	Not Available
2-hydroxypropyl methacrylate	Not Available
dipropoxy-p-toluidine	Not Available

Transport in bulk in accordance with the ICG Code

•	
Product name	Ship Type
2-hydroxyethyl methacrylate	Not Available
methylstyrene, mixed isomers	Not Available
ethylene glycol dimethacrylate	Not Available
2-hydroxypropyl methacrylate	Not Available
dipropoxy-p-toluidine	Not Available

SECTION 15 Regulatory information

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

2-hydroxyethyl methacrylate 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) -

Australian Inventory of Industrial Chemicals (AIIC)

methylstyrene, mixed isomers is found on the following regulatory lists

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Australian Inventory of Industrial Chemicals (AIIC)

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

ethylene glycol dimethacrylate is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

2-hydroxypropyl methacrylate is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) -Schedule 5

Australian Inventory of Industrial Chemicals (AIIC)

dipropoxy-p-toluidine is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

National Inventory Status

National Inventory	Status	
Australia - AIIC / Australia Non-Industrial Use	Yes	
Canada - DSL	Yes	
Canada - NDSL	No (2-hydroxyethyl methacrylate; methylstyrene, mixed isomers; ethylene glycol dimethacrylate; 2-hydroxypropyl methacrylate; dipropoxyp-toluidine)	
China - IECSC	Yes	
Europe - EINEC / ELINCS / NLP	Yes	
Japan - ENCS	Yes	
Korea - KECI	Yes	
New Zealand - NZIoC	Yes	
Philippines - PICCS	Yes	
USA - TSCA	Yes	
Taiwan - TCSI	Yes	
Mexico - INSQ	No (dipropoxy-p-toluidine)	
Vietnam - NCI	Yes	
Russia - FBEPH	No (dipropoxy-p-toluidine)	
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.	

SECTION 16 Other information

Revision Date	26/05/2022
Initial Date	17/05/2017

SDS Version Summary

Version	Date of Update	Sections Updated
5.1	20/08/2021	Classification change due to full database hazard calculation/update.
6.1	26/05/2022	Classification, Use

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

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

Definitions and abbreviations

PC-TWA: Permissible Concentration-Time Weighted Average

PC-STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit。

IDLH: Immediately Dangerous to Life or Health Concentrations

ES: Exposure Standard

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level

LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value

LOD: Limit Of Detection

OTV: Odour Threshold Value BCF: BioConcentration Factors

BEI: Biological Exposure Index

AIIC: Australian Inventory of Industrial Chemicals

DSL: Domestic Substances List NDSL: Non-Domestic Substances List

IECSC: Inventory of Existing Chemical Substance in China

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EINECS: European INventory of Existing Commercial chemical Substances

ELINCS: European List of Notified Chemical Substances

NLP: No-Longer Polymers

ENCS: Existing and New Chemical Substances Inventory

KECI: Korea Existing Chemicals Inventory NZIoC: New Zealand Inventory of Chemicals

PICCS: Philippine Inventory of Chemicals and Chemical Substances

TSCA: Toxic Substances Control Act

TCSI: Taiwan Chemical Substance Inventory INSQ: Inventario Nacional de Sustancias Químicas

NCI: National Chemical Inventory

FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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TEL (+61 3) 9572 4700.

Mungo MIT-SP, Comp. B Hobson Engineering Co Pty Ltd

Chemwatch: 5252-94 Version No: 6.1

Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements

Chemwatch Hazard Alert Code: 2

Issue Date: **26/05/2022** Print Date: **26/05/2022** L.GHS.AUS.EN.E

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

Product Identifier	
Product name	Mungo MIT-SP, Comp. B
Chemical Name	Not Applicable
Synonyms	Not Available
Chemical formula	Not Applicable
Other means of identification	Not Available

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

Relevant identified uses	Used in conjunction with Comp A to form mounting material.
Relevant identified uses	Use according to manufacturer's directions.

Details of the supplier of the safety data sheet

	•
Registered company name	Hobson Engineering Co Pty Ltd
Address	10 Clay Place Eastern Creek NSW 2176 Australia
Telephone	+61 2 8818 0222
Fax	+61 2 9620 1850
Website	www.hobson.com.au
Email	info@hobson.com.au

Emergency telephone number

Association / Organisation	CHEMWATCH EMERGENCY RESPONSE
Emergency telephone numbers	+61 1800 951 288
Other emergency telephone numbers	+61 3 9573 3188

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

SECTION 2 Hazards identification

Classification of the substance or mixture

olassification of the substance of mixture				
Poisons Schedule	Not Applicable			
Classification [1]	Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 2A			
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI			

Label elements

Hazard pictogram(s)



Signal word Wa

Warning

Hazard statement(s)

H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

Precautionary statement(s) Prevention

P280	Wear protective gloves, protective clothing, eye protection and face protection.
P261	Avoid breathing mist/vapours/spray.
P264	Wash all exposed external body areas thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.

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Precautionary statement(s) Response

P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

P501

Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

Not Applicable

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight] Name				
94-36-0	10-<20	dibenzoyl peroxide			
5444-75-7	<5	2-ethylhexylbenzoate			
Not Available	<5	reaction mass of diethylene glycol dibenzoate,			
Not Available	dipropylene glycol dibenzoate and triethylene				
Not Available	glycol dibenzoate				
Not Available	balance	Ingredients determined not to be hazardous			
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L * EU IOELVs available				

SECTION 4 First aid measures

Description of first aid measures

·	
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 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.
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.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Firefighting measures

Extinguishing media

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

Special hazards arising from the substrate or mixture

Fire Incompatibility

None known

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Advice for firefighters

Fire Fighting	 Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water courses. Use water delivered as a fine spray to control fire and cool adjacent area. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire. Equipment should be thoroughly decontaminated after use.
Fire/Explosion Hazard	 The material is not readily combustible under normal conditions. However, it will break down under fire conditions and the organic component may burn. Not considered to be a significant fire risk. Heat may cause expansion or decomposition with violent rupture of containers. Decomposes on heating and may produce toxic fumes of carbon monoxide (CO). May emit acrid smoke. Decomposes on heating and produces toxic fumes of: carbon dioxide (CO2)
HAZCHEM	Not Applicable

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Environmental precautions

See section 12

Methods and material for containment and cleaning up

	· · · · · · · · · · · · · · · · · · ·
Minor Spills	Slippery when spilt. Clean up all spills immediately. Avoid contact with skin and eyes. Wear impervious gloves and safety goggles. Trowel up/scrape up. Place spilled material in clean, dry, sealed container. Flush spill area with water.
Major Spills	Slippery when spilt. Minor hazard. Clear area of personnel. Alert Fire Brigade and tell them location and nature of hazard. Control personal contact with the substance, by using protective equipment as required. Prevent spillage from entering drains or water ways. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal. Wash area and prevent runoff into drains or waterways. If contamination of drains or waterways occurs, advise emergency services.

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

SECTION 7 Handling and storage

Precautions for safe handling Safe handling	 Limit all unnecessary personal contact. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. When handling DO NOT eat, drink or smoke. Always wash hands with soap and water after handling. Avoid physical damage to containers. Use good occupational work practice. Observe manufacturer's storage and handling recommendations contained within this SDS.
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. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this SDS. Store between 5 and 25 deg. C. Protect from light.

Conditions for safe storage, including any incompatibilities

Polyethylene or polypropylene container. Packing as recommended by manufacturer. Suitable container Check all containers are clearly labelled and free from leaks. For benzoyl peroxide: Avoid reaction with acids, alkalis, oxidising and reducing agents, metals and metal oxides, and combustible materials. Storage incompatibility Amines and solutions of cobalt salts used as promoters and accelerators in polyester compounds if mixed with benzoyl peroxide will cause spontaneous decomposition (detonation).

Alkalis cause rapid decomposition of benzoyl peroxide with generation of large volumes of carbon dioxide gas (CO2) and may pressurise

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containers

- Avoid contact with copper, brass, lead and zinc.
- Confined storage of the dry chemical may lead to decomposition and explosion.
- Extremely reactive oxidiser.
- An explosive that is sensitive to friction, shock, and heat.
- May decompose below its melting point (103 C).
- Fire and/ or explosion may result from contamination with alcohols, amines, aniline, N,N-dimethylaniline, ethers, polymerisation catalysts, lithium aluminium carbide, lithium tetrahydroaluminate, metallic naphthenates, methyl methacrylate, organic matter, charcoal.
- Attacks some plastics, rubber and coatings.
- Avoid cross contamination between the two liquid parts of product (kit).
- If two part products are mixed or allowed to mix in proportions other than manufacturer's recommendation, polymerisation with gelation and evolution of heat (exotherm) may occur.
- This excess heat may generate toxic vapour
- Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous

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	dibenzoyl peroxide	Benzoyl peroxide	5 mg/m3	Not Available	Not Available	Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
dibenzoyl peroxide	15 mg/m3	1,200 mg/m3	7,000 mg/m3

Ingredient	Original IDLH	Revised IDLH
dibenzoyl peroxide	1,500 mg/m3	Not Available
2-ethylhexylbenzoate	Not Available	Not Available

MATERIAL DATA

Exposure controls

Use in a well-ventilated area

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. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.

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

General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circumstances. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Air Speed

Appropriate engineering controls

Type of Contaminant.	All Speed.
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

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

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

Refer also to protective measures for the other component used with the product. Read both SDS before using; store and attach SDS together.

Personal protection









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Eye and face protection	 Safety glasses with side shields; or as required, 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. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]
Skin protection	See Hand protection below
Hands/feet protection	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. Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber
Body protection	See Other protection below
Other protection	 Overalls. P.V.C apron. Barrier cream. Skin cleansing cream. Eye wash unit.

Respiratory protection

Type A-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	A-AUS P2	-	A-PAPR-AUS / Class 1 P2
up to 50 x ES	-	A-AUS / Class 1 P2	-
up to 100 x ES	-	A-2 P2	A-PAPR-2 P2 ^

^{^ -} Full-face

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

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Black paste with characteristic odour; insoluble in water.		
Physical state	Non Slump Paste	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Applicable	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	116	Taste	Not Available
Evaporation rate	Not Applicable	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Applicable	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (Not Available%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	Product is considered stable and hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7

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Hazardous decomposition products

See section 5

SECTION 11 Toxicological information

-					
ormation on toxicological e	ffects				
Inhaled	Not normally a hazard due to non-volatile nature of produc	t			
Ingestion	The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.				
Skin Contact	individuals following direct contact, and/or produces signif hours, such inflammation being present twenty-four hours prolonged or repeated exposure; this may result in a form redness (erythema) and swelling (oedema) which may pro	Limited evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.			
Еуе	produce significant ocular lesions which are present twent	material may cause eye irritation in a substantial number of individuals and/or r y-four hours or more after instillation into the eye(s) of experimental animals. on characterised by temporary redness (similar to windburn) of the conjunctiva or transient eye damage/ulceration may occur.	·		
Chronic	individuals, and/or of producing a positive response in exp Substances that can cause occupational asthma (also knd hyper-responsiveness via an immunological, irritant or oth the substance, sometimes even to tiny quantities, may car asthma. Not all workers who are exposed to a sensitiser v become hyper-responsive. Substances than can cuase occupational asthma should the with pre-existing air-way hyper-responsiveness. The latter Wherever it is reasonably practicable, exposure to substat possible the primary aim is to apply adequate standards of Activities giving rise to short-term peak concentrations sho surveillance is appropriate for all employees exposed or lie	rial is capable either of inducing a sensitisation reaction in a substantial number erimental animals. who as asthmagens and respiratory sensitisers) can induce a state of specific a er mechanism. Once the airways have become hyper-responsive, further expo isse respiratory symptoms. These symptoms can range in severity from a runny ill become hyper-responsive and it is impossible to identify in advance who are e distinguished from substances which may trigger the symptoms of asthma ir substances are not classified as asthmagens or respiratory sensitisers neces that can cuase occupational asthma should be prevented. Where this is not control to prevent workers from becoming hyper-responsive. Find the properticular attention when risk management is being considered. He will be to be exposed to a substance which may cause occupational asthma and ealth professional over the degree of risk and level of surveillance.	airway osure to y nose to e likely to n people not		
Mungo MIT-SP, Comp. B	TOXICITY	IRRITATION			
Mango Miri-Sr, Comp. B	Not Available	Not Available			
	TOXICITY	IRRITATION			
dibenzoyl peroxide	dermal (mammal) LD50: >1000 mg/kg ^[2]	Eye (rabbit): 500 mg/24h - mild			
	Oral (Rat) LD50; 7710 mg/kg ^[2]	Skin effects (MAK): very weak			
	тохісіту	IRRITATION			
2-ethylhexylbenzoate	dermal (rat) LD50: >=5000 mg/kg ^[1]	Not Available			

	.,	,	

<u> </u>
IRRITATION
Not Available

Leaend:

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

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. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of

DIBENZOYL PEROXIDE

dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis. For benzoyl peroxide:

The acute oral toxicity of benzoyl peroxide is very low: LD50 >2,000 mg/kg bw in mice, and 5,000 mg/kg bw in rats. No deaths occurred in male rats following inhalation of 24.3 mg/L. Visible effects included eye squint, dyspnea, salivation, lacrimation, erythema and changes of respiratory

Benzoyl peroxide was slightly irritating to skins in 24 hr-patch tests. Benzoyl peroxide was not irritating to the eyes of rabbits if washed out within 5 minutes after instillation, however, if the chemical was not washed out until 24 hours later, it proved to be irritating.

Positive results from sensitisation tests in guinea pigs and mice, and from a maximization test in human volunteers, indicate that benzoyl

In the combined repeated dose and reproduction/developmental toxicity study (OECD TG 422), benzoyl peroxide did not produce hematological or biochemical adverse effects. Repeated administration by oral gavage up to 1,000 mg/kg bw/day for 29 days resulted in decreased weights of testes and epididymis in male rats. The NOAEL for repeated dose toxicity was 500 mg/kg bw/day.

This substance did not cause gene mutation in bacteria (OECD TG 471 & 472) and in vitro chromosomal aberration in CHL (Chinese Hamster Lung) cells. An in vivo mammalian erythrocytes micronucleus test (OECD TG 474) produced negative result. The available evidence supports the conclusion that benzoyl peroxide is not a mutagen.

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There is no evidence to suggest that benzoyl peroxide is a carcinogen. However, there is some evidence from nonguidelines studies that benzoyl peroxide is a skin tumour promoter.

In the combined repeated dose and reproduction/developmental toxicity study [OECD TG 422], no treatment-related changes in precoital time, rate of copulation, fertility and gestation were noted in any treated group. Adverse effects were shown at the highest dose of 1,000 mg/kg bw/day in parental male rats with the reduction of reproductive organ weight and slight testes degeneration. In parental female rats, no adverse effects were observed during the test period. The NOAEL for reproduction toxicity in male rats was 500 mg/kg bw/day. In the offspring, the only effect seen was that body weight gain of pups at dose of 1,000 mg/kg bw/day was significantly decreased. The NOAEL for developmental toxicity was 500 mg/kg bw/day.

The substance is classified by IARC as Group 3:

- Bioconcentration Data 8. Vendor Data

NOT classifiable as to its carcinogenicity to humans.

Evidence of carcinogenicity may be inadequate or limited in animal testing.

2-ETHYLHEXYLBENZOATE

No significant acute toxicological data identified in literature search

Acute Toxicity	×	Carcinogenicity	×
Skin Irritation/Corrosion	×	Reproductivity	×
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	X
Respiratory or Skin sensitisation	✓	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	×

Legend:

💢 – Data either not available or does not fill the criteria for classification

— Data available to make classification

SECTION 12 Ecological information

Toxicity

Mungo MIT-SP, Comp. B	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
	EC10(ECx)	504h	Crustacea	0.001mg/l	2
dibenzoyl peroxide	LC50	96h	Fish	Fish 0.06mg/l	
	EC50	72h	Algae or other aquatic plants	Algae or other aquatic plants 0.042mg/l	
	EC50	48h	Crustacea	0.11mg/l	2
	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	96h	Algae or other aquatic plants	>=0.035mg/l	2
	LC50	96h	Fish	>0.66mg/l	2
0 - 41 - 11 11 4 -	EC50	72h	Algae or other aquatic plants	8.14mg/l	2
2-ethylhexylbenzoate	EC30				_
2-ethylhexylbenzoate	EC50	48h	Crustacea	>0.125mg/l	2

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air	
dibenzoyl peroxide	LOW (Half-life = 14 days)	LOW (Half-life = 21.25 days)	
2-ethylhexylbenzoate	LOW	LOW	

Bioaccumulative potential

Ingredient	Bioaccumulation	
dibenzoyl peroxide	LOW (LogKOW = 3.46)	
2-ethylhexylbenzoate	HIGH (LogKOW = 5.1924)	

Mobility in soil

Ingredient	Mobility
dibenzoyl peroxide	LOW (KOC = 771)
2-ethylhexylbenzoate	LOW (KOC = 5178)

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal

[▶] Recycle wherever possible or consult manufacturer for recycling options.

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- Consult State Land Waste Management Authority for disposal.
- Material may be disposed of by controlled burning in an approved incinerator or buried in an approved landfill.
- Prior to disposal in a landfill the material should be mixed with the other component and reacted to render the material inert.
- Extreme caution should be taken when heating the resin/curing agent mix.
- ▶ Recycle containers where possible, or dispose of in an authorised landfill.

SECTION 14 Transport information

Labels Required

Marine Pollutant	NO	
HAZCHEM	Not Applicable	

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

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

Not Applicable

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

Product name	Group
dibenzoyl peroxide	Not Available
2-ethylhexylbenzoate	Not Available

Transport in bulk in accordance with the ICG Code

Product name	Ship Type
dibenzoyl peroxide	Not Available
2-ethylhexylbenzoate	Not Available

SECTION 15 Regulatory information

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

dibenzoyl peroxide is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 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 $\,$

2-ethylhexylbenzoate is found on the following regulatory lists

Not Applicable

Australian Inventory of Industrial Chemicals (AIIC)

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

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

National Inventory Status

National Inventory	Status	
Australia - AIIC / Australia Non-Industrial Use	No (2-ethylhexylbenzoate)	
Canada - DSL	Yes	
Canada - NDSL	No (dibenzoyl peroxide; 2-ethylhexylbenzoate)	
China - IECSC	Yes	
Europe - EINEC / ELINCS / NLP	Yes	
Japan - ENCS	Yes	
Korea - KECI	Yes	
New Zealand - NZIoC	Yes	
Philippines - PICCS	No (2-ethylhexylbenzoate)	
USA - TSCA	Yes	
Taiwan - TCSI	Yes	
Mexico - INSQ	No (2-ethylhexylbenzoate)	
Vietnam - NCI	Yes	
Russia - FBEPH	No (2-ethylhexylbenzoate)	
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.	

SECTION 16 Other information

Revision Date	26/05/2022
Initial Date	18/05/2017
Initial Date	18/05/2017

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Version No: 6.1

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SDS Version Summary

Version	Date of Update	Sections Updated
5.1	10/12/2021	Classification change due to full database hazard calculation/update.
6.1	26/05/2022	Classification, Use

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

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

Definitions and abbreviations

PC-TWA: Permissible Concentration-Time Weighted Average

PC-STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit。

IDLH: Immediately Dangerous to Life or Health Concentrations

ES: Exposure Standard

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value

LOD: Limit Of Detection

OTV: Odour Threshold Value

BCF: BioConcentration Factors

BEI: Biological Exposure Index

AIIC: Australian Inventory of Industrial Chemicals

DSL: Domestic Substances List NDSL: Non-Domestic Substances List

IECSC: Inventory of Existing Chemical Substance in China

EINECS: European INventory of Existing Commercial chemical Substances

ELINCS: European List of Notified Chemical Substances

NLP: No-Longer Polymers

ENCS: Existing and New Chemical Substances Inventory

KECI: Korea Existing Chemicals Inventory

NZIoC: New Zealand Inventory of Chemicals

PICCS: Philippine Inventory of Chemicals and Chemical Substances

TSCA: Toxic Substances Control Act

TCSI: Taiwan Chemical Substance Inventory

INSQ: Inventario Nacional de Sustancias Químicas

NCI: National Chemical Inventory

FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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