

BIS-P GEN2, Comp. A

Iccons

Chemwatch: 5396-40

Version No: 5.1

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

Chemwatch Hazard Alert Code: 2

Initial Date: 20/04/2020

Revision Date: 21/05/2026

Print Date: 07/07/2026

L.GHS.AUS.EN.E

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

Product Identifier

Product name	BIS-P GEN2, Comp. A
Chemical Name	Not Applicable
Synonyms	PolyPRO GEN2, Comp. A
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	Adhesive mortar for fastening elements A-component (resin).
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Details of the manufacturer or importer of the safety data sheet

Registered company name	Iccons
Address	383 Frankston Dandenong Road Dandenong South VIC 3175 Australia
Telephone	+61 3 9706 4344
Fax	Not Available
Website	www.iccons.com.au
Email	info@iccons.com.au

Emergency telephone number

Association / Organisation	CHEMWATCH EMERGENCY RESPONSE (24/7)
Emergency telephone number(s)	+61 1800 951 288 (ID#: 5396-40)
Other emergency telephone number(s)	+61 3 9573 3188

SECTION 2 Hazards identification

Classification of the substance or mixture

Poisons Schedule	Not Applicable
Classification ^[1]	Skin Corrosion/Irritation Category 2, Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 2A, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3, Germ Cell Mutagenicity 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	Warning

Hazard statement(s)

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statement(s) Prevention

P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing, eye protection and face protection.

P261	Avoid breathing mist/vapours/spray.
P273	Avoid release to the environment.
P202	Do not handle until all safety precautions have been read and understood.
P264	Wash all exposed external body areas thoroughly after handling.
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.
P312	Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
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.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Precautionary statement(s) Storage

P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.
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No further product hazard information.

SECTION 3 Composition / information on ingredients**Substances**

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
2082-81-7	10-<20	<u>1,4-butanediol dimethacrylate</u>
25013-15-4	1-<5	<u>methylstyrene, mixed isomers</u>
97-90-5	1-<5	<u>ethylene glycol dimethacrylate</u>
27813-02-1	1-<5	<u>2-hydroxypropyl methacrylate</u>
3077-12-1	<1.5	<u>N,N-bis(2-hydroxyethyl)-p-toluidine</u>
38668-48-3	<1	<u>dipropoxy-p-toluidine</u>
6846-50-0	<1	<u>2,2,4-trimethyl-1,3-pentanediol diisobutyrate</u>
130-15-4	<0.1	<u>1,4-naphthoquinone</u>
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, without delay.
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.

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SECTION 5 Firefighting measures

Extinguishing media

- ▶ Foam.
 - ▶ Dry chemical powder.
 - ▶ BCF (where regulations permit).
 - ▶ Carbon dioxide.
 - ▶ Water spray or fog - Large fires only.
- Do not** use water jets.

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
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Advice for firefighters

Fire Fighting	▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ May be violently or explosively reactive. ▶ Wear full body protective clothing with breathing apparatus. ▶ Prevent, by any means available, spillage from entering drains or water course. ▶ Fight fire from a safe distance, with adequate cover. ▶ If safe, switch off electrical equipment until vapour fire hazard removed. ▶ Use water delivered as a fine spray to control the fire and cool adjacent area. ▶ Avoid spraying water onto liquid pools. ▶ Do not approach containers suspected to be hot. ▶ Cool fire exposed containers with water spray from a protected location. ▶ 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	▶ Combustible. ▶ Slight fire hazard when exposed to heat or flame. ▶ Heating may cause expansion or decomposition leading to violent rupture of containers. ▶ On combustion, may emit toxic fumes of carbon monoxide (CO). ▶ May emit acrid smoke. ▶ Mists containing combustible materials may be explosive. Combustion products include: ▶ carbon dioxide (CO₂) ▶ nitrogen oxides (NO_x) ▶ other pyrolysis products typical of burning organic material. May emit poisonous fumes. May emit corrosive fumes.
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

Minor Spills	▶ 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	▶ 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. ▶ 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.

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

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	▶ Most acrylic monomers have low viscosity therefore pouring, material transfer and processing of these materials do not necessitate heating. ▶ Viscous monomers may require heating to facilitate handling. To facilitate product transfer from original containers, product must be heated to no more than 60 deg. C. (140 F.), for not more than 24 hours. ▶ Do NOT use localised heat sources such as band heaters to heat/ melt product. ▶ Do NOT use steam.
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BIS-P GEN2, Comp. A

	- Hot boxes or hot rooms are recommended for heating/ melting material. The hot box or hot room should be set a maximum temperature of 60 deg. C. (140 F.). Do NOT overheat - this may compromise product quality and /or result in an uncontrolled hazardous polymerisation. - Avoid skin contact, including inhalation. - Wear protective clothing when risk of exposure occurs. - Use in a well-ventilated area. - Prevent concentration in hollows and sumps. DO NOT enter confined spaces until atmosphere has been checked. DO NOT allow material to come in direct contact with human skin or eyes. DO NOT allow material to come in contact with exposed food or food contact surfaces. - Suitable PPE must be worn at all times. - Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke.
Other information	- Store in original containers. - Keep containers securely sealed. - No smoking, naked lights or ignition sources. - 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	- Metal can or drum - Packaging as recommended by manufacturer. - Check all containers are clearly labelled and free from leaks.
Storage incompatibility	- Avoid reaction with oxidising agents - 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

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
Australia Workplace exposure limits for airborne contaminants (WEL list) (Effective from 1 December 2026) - Appendix A - Workplace Exposure Limits	methylstyrene, mixed isomers	Vinyl toluene	20 ppm / 97 mg/m3	193 mg/m3 / 40 ppm	Not Available	Not Available

MATERIAL DATA

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. 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 special circumstances. If risk of overexposure exists, wear approved respirator.
Individual protection measures, such as personal protective equipment	
Eye and face protection	- Safety glasses with side shields. - Chemical goggles.[AS/NZS 1337.1, EN166 or national equivalent] - Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].
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. General warning: Do NOT use latex gloves! Use only recommended gloves - using the wrong gloves may increase the risk: Exposure condition Short time use; (few minutes less than 0.5 hour) Use of thin nitrile rubber gloves: Nitrile rubber (0.1 mm) Excellent tactility ("feel"), powder-free

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	Little physical stress	Disposable Inexpensive Give adequate protection to low molecular weight acrylic monomers
	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 tactility ("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 tactility ("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.
Where none of this gloves ensure safe handling (for example in long term handling of acrylates containing high levels of acetates and/ or ketones, use laminated multilayer gloves. Guide to the Classification and Labelling of UV/EB Acrylates Third edition, 231 October 2007 - Cefic		
Body protection	See Other protection below	
Other protection	▶ Overalls. ▶ P.V.C apron. ▶ Barrier cream. ▶ Skin cleansing cream. ▶ Eye wash unit.	

Respiratory protection

Type AK-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	AK-AUS P2	-	AK-PAPR-AUS / Class 1 P2
up to 50 x ES	-	AK-AUS / Class 1 P2	-
up to 100 x ES	-	AK-2 P2	AK-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)

- ▶ Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- ▶ The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- ▶ Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Light beige coloured paste; does not mix with water.		
Physical state	Non Slump Paste	Relative density (Water = 1)	1.72 @20C
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 (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (1%)	Not Applicable
Vapour density (Air = 1)	Not Available	VOC g/L	2.8
Heat of Combustion (kJ/g)	Not Available	Ignition Distance (cm)	Not Available
Flame Height (cm)	Not Available	Flame Duration (s)	Not Available

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Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	Enclosed Space Ignition Deflagration Density (g/m3)	Not Available
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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

a) Acute Toxicity	Based on available data, the classification criteria are not met.
b) Skin Irritation/Corrosion	There is sufficient evidence to classify this material as skin corrosive or irritating.
c) Serious Eye Damage/Irritation	There is sufficient evidence to classify this material as eye damaging or irritating
d) Respiratory or Skin sensitisation	There is sufficient evidence to classify this material as sensitising to skin or the respiratory system
e) Mutagenicity	There is sufficient evidence to classify this material as mutagenic
f) Carcinogenicity	Based on available data, the classification criteria are not met.
g) Reproductivity	Based on available data, the classification criteria are not met.
h) STOT - Single Exposure	There is sufficient evidence to classify this material as toxic to specific organs through single exposure
i) STOT - Repeated Exposure	Based on available data, the classification criteria are not met.
j) Aspiration Hazard	Based on available data, the classification criteria are not met.

Inhaled	Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system, in a substantial number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system. 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	Although ingestion is not thought to produce harmful effects (as classified under EC Directives), 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	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 Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds 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 causes serious eye irritation.
Chronic	Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. Strong evidence exists that the substance may cause irreversible but non-lethal mutagenic effects following a single exposure. 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 that can cause 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 cause 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. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. Sensitisation may give severe responses to very low levels of exposure, in situations where exposure may occur. All multifunctional acrylates (MFA) produce skin discomfort and are known or suspected skin sensitisers. Aerosols generated in the industrial process are reported to produce dermatitis - vapours generated by the heat of milling may also occur in sufficient concentration to produce dermatitis. Because exposure to industrial aerosols of MFA may also include exposure to various resin systems, photo-initiators, solvents,

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BIS-P GEN2, Comp. A

hydrogen-transfer agents, stabilisers, surfactants, fillers and polymerisation inhibitors, toxic effects may arise due to a range of chemical actions.

BIS-P GEN2, Comp. A	TOXICITY	IRRITATION
	Inhalation (None) LC50: 265.9 mg/l(vapour)* ^[2]	Not Available
	Inhalation (None) LC50: 36.259 mg/l(dust/mist)* ^[2]	
	Oral (None) LD50: 8042.2 mg/kg* ^[2]	
1,4-butanediol dimethacrylate	TOXICITY	IRRITATION
	Oral (Rat) LD50: 10.066 mg/kg ^[1]	Eye: no adverse effect observed (not irritating) ^[1]
		Skin (Human - woman): 2%/48H
		Skin: no adverse effect observed (not irritating) ^[1]
methylstyrene, mixed isomers	TOXICITY	IRRITATION
	Inhalation (Mouse) LC50: 3.02 mg/L4h ^[2]	Eye (Rodent - rabbit): 90mg - Mild
	Oral (Rat) LD50: 2255 mg/kg ^[2]	Eye: no adverse effect observed (not irritating) ^[1]
		Skin (Rodent - rabbit): 100% - Moderate
ethylene glycol dimethacrylate	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg ^[1]	Eye: no adverse effect observed (not irritating) ^[1]
	Oral (Mouse) LD50: 2000 mg/kg ^[2]	Skin (Human - woman): 2%/48H
		Skin: no adverse effect observed (not irritating) ^[1]
2-hydroxypropyl methacrylate	TOXICITY	IRRITATION
	Oral (Rat) LD50: 5050 mg/kg ^[2]	Eye: adverse effect observed (irritating) ^[1]
		Skin (Human - woman): 2%
		Skin (Human): 2%/48H
N,N-bis(2-hydroxyethyl)-p-toluidine	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg ^[1]	Eye: adverse effect observed (irreversible damage) ^[1]
	Oral (Mouse) LD50: 650 mg/kg ^[2]	Skin: no adverse effect observed (not irritating) ^[1]
dipropoxy-p-toluidine	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg ^[1]	Eye: adverse effect observed (irritating) ^[1]
	Oral (Rat) LD50: >25<200 mg/kg ^[1]	Skin: no adverse effect observed (not irritating) ^[1]
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg ^[1]	Eye: no adverse effect observed (not irritating) ^[1]
	Oral (Rat) LD50: >2000 mg/kg ^[1]	Skin (Human): 1%/3W - Mild
		Skin (Rodent - guinea pig): 5gm - Mild
1,4-naphthoquinone	TOXICITY	IRRITATION
	dermal (rat) LD50: 202 mg/kg ^[2]	Skin: adverse effect observed (corrosive) ^[1]
	Inhalation (Rat) LC50: 0.046 mg/l4h ^[1]	Skin: adverse effect observed (irritating) ^[1]
	Oral (Rat) LD50: 190 mg/kg ^[2]	

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

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.
ETHYLENE GLYCOL DIMETHACRYLATE	A high consumption of oxidised polyunsaturated fatty acids (PUFAs), which are found in most types of vegetable oil, may increase the likelihood that postmenopausal women will develop breast cancer. Similar effect was observed on prostate cancer, but the study was performed on mice Another "analysis suggested an inverse association between total polyunsaturated fatty acids and breast cancer risk, but individual polyunsaturated fatty acids behaved differently [from each other]. [...] a 20:2 derivative of linoleic acid [...] was inversely associated with the risk of breast cancer" PUFAs are prone to spontaneous oxidation/ peroxidation. The feeding of lipid oxidation products and oxidised fats has been reported to cause adverse biological effects on laboratory animals, including growth retardation, teratogenicity, tissue damage and increased liver and kidney weights, as well as cellular damage to the testes and epididymes, increased peroxidation of membrane and tissue lipids and induction of cytochrome P450 activities in the colon and liver. The propensity for PUFAs to oxidise leads to the generation of free radicals and eventually to rancidity.

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BIS-P GEN2, Comp. A

Culinary oils, when heated, undergo important chemical reaction involving self-sustaining, free radical-mediated oxidative deterioration of PUFAs. Such by-products may be cytotoxic, mutagenic, reproductive toxins and may produce chronic disease. Samples of repeatedly used oils collected from fast-food retail outlets and restaurants have confirmed the production of aldehydic lipid oxidation products (LOPs) at levels exceeding 10 exp-2 moles per kilogram (mol/kg) during "on-site" frying episodes. Volatile emissions from heated culinary oils used in Chinese-style cooking are mutagenic; exposure to such indoor air pollution may render humans more susceptible to contracting lung or further cancers, together with rhinitis and diminished lung function. The high temperatures used in standard (especially Chinese) frying result in fumes that are rich in volatile LOPs, including acrolein.

The end products of lipid peroxidation are reactive aldehydes, such as malondialdehyde (MDA) and 4-hydroxynonenal (HNE), the second one being known also as "second messenger of free radicals" and major bioactive marker of lipid peroxidation, due to its numerous biological activities resembling activities of reactive oxygen species. end-products of lipid peroxidation may be mutagenic and carcinogenic malondialdehyde reacts with deoxyadenosine and deoxyguanosine in DNA, forming DNA adducts. Malondialdehyde produces mutagenic effects in several bioassays.

Side products of lipid peroxidation can also exert toxic effects, even at sites distant from the primary oxidation site.

Free radicals can react with specific cellular molecules including low molecular weight biomolecules such as neurotransmitters and co-enzymes and, as a consequence, inactivate them. macromolecules and cellular membranes are particularly vulnerable to free radical damage with the resultant loss of physiological function and cell death Depolymerisation of polysaccharides (such as hyaluronic acid) may result in inflammation of the joints.

Free radicals have a high affinity for sulfur containing amino-acids and therefore many proteins. The may bind covalently to these proteins leading to loss, of biological function such as catalysis exhibited by enzymes. Covalent binding may also result in allergic reactions when the modified protein is recognised, by the bodies immune system, as "foreign" Free radicals are also capable of causing proteins to cross-link to yield larger aggregates.

Free radicals are also able to react with the nucleic acids of DNA which may affect cell division or cell death Oxidative modifications of DNA may result in tumour initiation.

Lipids containing several double bonds (such as polyunsaturated fatty acids and cholesterol) are also subject to damage. In the case of membrane phospholipids, such "peroxidation" results in impairment of cellular and/ or subcellular membranes which may produce cell death. Transition metal ions may also play an important role in lipid peroxidation after free radical-induced change of valency . Fe3+/Fe2+, copper and mercury ions, as well as vanadate and chromate ions seem to initiate this process and may even exacerbate it by producing secondary radicals when the phospholipid is modified.

ferroptosis, a non apoptotic form of cell death characterized by iron accumulation and uncontrolled lipid peroxidation, holds promise as a therapeutic approach in cancer treatment, alongside established modalities, such as chemotherapy, immunotherapy, and radiotherapy. However, research has raised concerns about its side effects, including damage to immune cells, hematopoietic stem cells, liver, and kidneys, the development of cachexia, and the risk of secondary tumor formation.

ferroptosis leading to plasma membrane rupture and intracellular content release was Originally investigated as a targeted therapy for cancer cells carrying oncogenic RAS mutations, ferroptosis . However, it can lead to side effects, including immune cell death, bone marrow impairment, liver and kidney damage, cachexia (severe weight loss and muscle wasting), and secondary tumorigenesis.

ecifically, the term 'ferroptosis,, delineates a distinctive form of non-apoptotic cell demise marked by uncontrolled lipid peroxidation [. Traditional cell death effectors, such as caspases, GSDMD (gasdermin D), and MLKL (mixed lineage kinase domain like pseudokinase), are not essential for the process of ferroptosis [. Ferroptosis can be categorized as a type of regulated necrosis and exhibits some morphological characteristics reminiscent of necrotic cell features, such as plasma membrane rupture . Mechanistically, ferroptosis is mediated by the generation of toxic oxidized lipids, including 4-hydroxynonenal, as a result of lipid peroxidation . Additionally, advanced lipid peroxidation end products can lead to oxidative damage to proteins or nucleic acids, causing cellular dysfunction . Conversely, various antioxidant systems, comprising both GPX4 (glutathione peroxidase 4)-dependent and GPX4-independent pathways, play a context-dependent role in defending against ferroptosis

Erastin and RSL3 are two well-known small molecule compounds that are frequently used to trigger ferroptosis and explore the associated mechanisms of this cell death pathway.

Erastin is a novel compound capable of selectively killing engineered tumorigenic cells with RAS mutations, but not wild type cells.

Steroid Receptor Coactivator (SRC) modulators (like inhibitors or knockouts) affect hormone-driven processes, potentially causing reproductive issues (dwarfism, infertility), immune dysregulation (autoimmunity, T-cell changes), metabolic shifts, and influencing cancer growth (both promoting and inhibiting depending on the context). Side effects often relate to their fundamental role in regulating steroid hormones (estrogen, androgen, progesterone) in tissues like the brain, reproductive organs, and immune cells, leading to broad systemic impacts, though specific inhibitors (like SRC-3 inhibitors in Tregs) show promise with fewer general toxicities than broader therapies

Key Adverse Effects & Considerations:

Reproductive & Endocrine:

Dysfunction: SRC knockout in mice causes reproductive failure, delayed puberty, and dwarfism.

Behavioral: SRC-1 inhibition can alter sex behaviors and brain development in rodents.

Immune System:

Treg Modulation: Inhibiting SRCs (especially SRC-3) in Regulatory T cells (Tregs) can boost anti-cancer immunity but might also impact normal immune balance.

Potential Autoimmunity: While SRC-3 KO Tregs seem benign, broader immune targeting can lead to severe autoimmunity, though SRC inhibitors aim to avoid this.

Cancer:

Dual Role: SRCs drive many cancers (breast, ovarian, prostate). Modulators can inhibit tumor growth, but some (like pan-SRC inhibitors) might impair anti-tumor immunity

General Systemic Effects:

Metabolic: SRC dysregulation is linked to Polycystic Ovary Syndrome (PCOS) and fibroids.

Brain Function: SRCs are crucial for neuroendocrine regulation, affecting seasonal cycles and hormone responses in the brain

Therapeutic Context Matters:

Specific vs. Pan-Inhibitors: Targeting specific SRCs (like SRC-3 in Tregs) or using targeted inhibitors (like SI-2) aims for anti-cancer effects with fewer systemic side effects than broader immune checkpoint inhibitors, avoiding issues like cytokine release syndrome.

Drug Development: Natural compounds (gossypol, bufalin) and synthetic molecules (SI-2) are being developed, showing potential for non-hormonal treatments in women's health, but clinical application needs careful study.

In essence, SRC modulators are powerful tools affecting fundamental hormone signaling, meaning their "adverse effects" are often the flip side of their therapeutic action, necessitating precise targeting for safe use.

2-HYDROXYPROPYL METHACRYLATE

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

2,2,4-TRIMETHYL-1,3-PENTANEDIOL DIISOBUTYRATE

NOAEL oral (rat), 103 days = 1% in diet *** NOEL oral (dog), 90 days = 1% in diet *** Mutagenicity/Genotoxicity Data: *** Chromosomal aberration assay: Negative (+/- activation) CHO/HGPRT assay: Negative (+/- activation) Salmonella-E.coli reverse mutation assay (Ames test): Negative (+/- activation) *, **, *** Various suppliers MSDS Sensitization Species:Guinea pig: Result: sensitizing Effects on foetal development: Species: Rabbit Application Route: Oral Developmental Toxicity: NOAEL: 300 mg/kg body weight Reproductive toxicity:Assessment: Some evidence of adverse effects on development, based on animal experiments. * Eastman Benzoflex 6000 Plasticiser

For 2,2,4-trimethyl-1,3-pentanediol diisobutyrate (TXIB)

TXIB showed no genotoxic effects in bacteria and chromosomal aberration test *in vitro*.

Reproductive/ developmental toxicity: In a combined repeat dose and reproductive/developmental toxicity screening test, increase of liver and kidney weights were observed in parental animals from the middle dose level (150 mg/kg/day). In the histopathological examinations, increases in grade of basophilic change of renal tubular epithelium and degeneration of hyaline droplet were observed from the same level. In addition, necrosis and other renal effects were also observed. From the view point of reproductive/developmental end-points, there were no effects observed related to mating, fertility and oestrus cycle and also for dams during the pregnancy and lactation period and for pups after their birth. Therefore, NOEL was 30 mg/kg/day for repeated dose toxicity as well as 750 mg/kg/day for reproductive toxicity.

Genotoxicity: The chemical showed no genotoxic effects in bacteria and chromosomal aberration tests *in vitro*

1,4-NAPHTHOQUINONE

Somnolence, dyspnae, tumors, maternal effects recorded. Equivocal tumorigen by RTECS criteria. Active as anti-cancer agent.

BIS-P GEN2, Comp. A

	Biologically active naphthoquinones readily pass through the cellular membranes where their electrophilicity enables them to conjugate with other compounds. This reaction has been implicated in the toxicity of quinones. Nucleophilic targets include thiol groups which results in inhibition of enzymes such as parvulin-like peptidyl-prolyl <i>cis/trans</i> isomerases, glutathione-S-transferase and cardiac sarcoplasmic reticulum Ca2+ ATPase The toxicity of quinone compounds has been extensively studied and is generally accepted to be a function of (a) the capacity of quinones to produce oxygen free radicals and (b) the electrophilicity of quinones, which enables them to form adducts to cellular macromolecules. <i>In vitro</i> experiments designed to examine the relative rates of enzymatic single-electron reduction demonstrated that naphthoquinones, especially juglone, undergo rapid single-electron reduction. Unsubstituted naphthoquinones generally do not show mutagenicity in the <i>Salmonella</i> mutation assay in the presence or absence of S-9 metabolic activation. However, substituted naphthoquinones containing one or more hydroxyl groups and/or methoxyl groups have been shown to be mutagenic in <i>S. typhimurium</i> in the presence of S-9. Naphthoquinone derivatives have significant pharmacological properties. They are cytotoxic, they have significant antibacterial, antifungal, antiviral, insecticidal, anti-inflammatory, and antipyretic properties. Plants with naphthoquinone content are widely used in China and the countries of South America, where they are used to treat malignant and parasitic diseases
1,4-BUTANEDIOL DIMETHACRYLATE & ETHYLENE GLYCOL DIMETHACRYLATE & 2-HYDROXYPROPYL METHACRYLATE & N,N-BIS(2-HYDROXYETHYL)-P-TOLUIDINE & 2,2,4-TRIMETHYL-1,3-PENTANEDIOL DIISOBUTYRATE & 1,4-NAPHTHOQUINONE	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.
1,4-BUTANEDIOL DIMETHACRYLATE & ETHYLENE GLYCOL DIMETHACRYLATE & 2-HYDROXYPROPYL METHACRYLATE & N,N-BIS(2-HYDROXYETHYL)-P-TOLUIDINE & 1,4-NAPHTHOQUINONE	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.
1,4-BUTANEDIOL DIMETHACRYLATE & 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 weight 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.
1,4-BUTANEDIOL DIMETHACRYLATE & ETHYLENE GLYCOL DIMETHACRYLATE & 2-HYDROXYPROPYL METHACRYLATE	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 Monoalkyl or monoarylesters of acrylic acids should be classified as R36/37/38 and R51/53 Monoalkyl or monoaryl esters of methacrylic acid should be classified as R36/37/38 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.
1,4-BUTANEDIOL DIMETHACRYLATE & METHYLSTYRENE, MIXED ISOMERS & N,N-BIS(2-HYDROXYETHYL)-P-TOLUIDINE	No significant acute toxicological data identified in literature search.
METHYLSTYRENE, MIXED ISOMERS & 2,2,4-TRIMETHYL-1,3-PENTANEDIOL DIISOBUTYRATE	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

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					
BIS-P GEN2, Comp. A	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available

Continued...

1,4-butanediol dimethacrylate	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	4.97mg/l	2
	NOEC(ECx)	72h	Algae or other aquatic plants	2.11mg/l	2
	LC50	96h	Fish	12.4mg/l	2
methylstyrene, mixed isomers	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	0.319mg/l	2
	EC50	48h	Crustacea	>1<10mg/l	4
	EC50	96h	Algae or other aquatic plants	4.122mg/l	2
	NOEC(ECx)	504h	Crustacea	0.07mg/l	2
	LC50	96h	Fish	5.2mg/l	2
ethylene glycol dimethacrylate	Endpoint	Test Duration (hr)	Species	Value	Source
	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
	NOEC(ECx)	96h	Algae or other aquatic plants	0.804mg/l	2
	LC50	96h	Fish	15.95mg/l	2
2-hydroxypropyl methacrylate	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	>97.2mg/l	2
	EC50	48h	Crustacea	>143mg/l	2
	NOEC(ECx)	336h	Fish	25mg/l	2
	LC50	96h	Fish	>100mg/l	2
N,N-bis(2-hydroxyethyl)-p-toluidine	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	>100mg/l	2
	EC50	48h	Crustacea	48mg/l	2
	EC50(ECx)	48h	Crustacea	48mg/l	2
	LC50	96h	Fish	>100mg/l	2
dipropoxy-p-toluidine	Endpoint	Test Duration (hr)	Species	Value	Source
	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
	LC50	96h	Fish	17mg/l	2
2,2,4-trimethyl-1,3-pentenediol diisobutyrate	Endpoint	Test Duration (hr)	Species	Value	Source
	BCF	1008h	Fish	0.6-0.8	7
	EC50	72h	Algae or other aquatic plants	>7.49mg/l	2
	EC50	48h	Crustacea	>1.46mg/l	1
	NOEC(ECx)	504h	Crustacea	0.7mg/l	2
	LC50	96h	Fish	>1.55mg/l	2
1,4-naphthoquinone	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	0.42mg/l	2
	EC50	48h	Crustacea	0.026mg/l	2
	EC50(ECx)	48h	Crustacea	0.026mg/l	2
	LC50	96h	Fish	0.045mg/l	2

Legend: *Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. US EPA, Ecotox database - Aquatic Toxicity Data 4. ECETOC Aquatic Hazard Assessment Data 5. NITE (Japan) - Bioconcentration Data 6. METI (Japan) - Bioconcentration Data 7. 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
1,4-butanediol dimethacrylate	LOW	LOW
ethylene glycol dimethacrylate	LOW	LOW
2-hydroxypropyl methacrylate	LOW	LOW
N,N-bis(2-hydroxyethyl)-p-toluidine	LOW	LOW
dipropoxy-p-toluidine	HIGH	HIGH
2,2,4-trimethyl-1,3-pentenediol diisobutyrate	HIGH	HIGH
1,4-naphthoquinone	LOW	LOW

Continued...

Bioaccumulative potential

Ingredient	Bioaccumulation
1,4-butanediol dimethacrylate	LOW (LogKOW = 3.19)
methylstyrene, mixed isomers	LOW (BCF = 110)
ethylene glycol dimethacrylate	LOW (LogKOW = 2.2088)
2-hydroxypropyl methacrylate	LOW (BCF = 3.2)
N,N-bis(2-hydroxyethyl)-p-toluidine	LOW (LogKOW = 1.09)
dipropoxy-p-toluidine	LOW (LogKOW = 2.01)
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	LOW (BCF = 1)
1,4-naphthoquinone	LOW (LogKOW = 1.71)

Mobility in soil

Ingredient	Mobility
1,4-butanediol dimethacrylate	LOW (Log KOC = 92.37)
ethylene glycol dimethacrylate	LOW (Log KOC = 27.15)
2-hydroxypropyl methacrylate	LOW (Log KOC = 10)
N,N-bis(2-hydroxyethyl)-p-toluidine	LOW (Log KOC = 10)
dipropoxy-p-toluidine	LOW (Log KOC = 10)
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	LOW (Log KOC = 607.5)
1,4-naphthoquinone	LOW (Log KOC = 16.05)

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal	▶ DO NOT allow wash water from cleaning or process equipment to enter drains. ▶ It may be necessary to collect all wash water for treatment before disposal. ▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. ▶ Where in doubt contact the responsible authority. ▶ Recycle wherever possible or consult manufacturer for recycling options. ▶ Consult State Land Waste Authority for disposal. ▶ Bury or incinerate residue at an approved site. ▶ Recycle containers if possible, or dispose of in an authorised landfill.
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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

14.7. Maritime transport in bulk according to IMO instruments

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

Not Applicable

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

Product name	Group
1,4-butanediol dimethacrylate	Not Applicable
methylstyrene, mixed isomers	Not Applicable
ethylene glycol dimethacrylate	Not Applicable
2-hydroxypropyl methacrylate	Not Applicable
N,N-bis(2-hydroxyethyl)-p-toluidine	Not Applicable
dipropoxy-p-toluidine	Not Applicable
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	Not Applicable
1,4-naphthoquinone	Not Applicable

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
1,4-butanediol dimethacrylate	Not Applicable

Product name	Ship Type
ethylene glycol dimethacrylate	Not Applicable
2-hydroxypropyl methacrylate	Not Applicable
N,N-bis(2-hydroxyethyl)-p-toluidine	Not Applicable
dipropoxy-p-toluidine	Not Applicable
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	Not Applicable
1,4-naphthoquinone	Not Applicable

SECTION 15 Regulatory information

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

- 1,4-butanediol dimethacrylate is found on the following regulatory lists**
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australian Inventory of Industrial Chemicals (AIIC)
- methylstyrene, mixed isomers is found on the following regulatory lists**
Australian Inventory of Industrial Chemicals (AIIC)
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic
- 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)
- N,N-bis(2-hydroxyethyl)-p-toluidine is found on the following regulatory lists**
Australian Inventory of Industrial Chemicals (AIIC)
- dipropoxy-p-toluidine is found on the following regulatory lists**
Australian Inventory of Industrial Chemicals (AIIC)
- 2,2,4-trimethyl-1,3-pentanediol diisobutyrate is found on the following regulatory lists**
Australian Inventory of Industrial Chemicals (AIIC)
- 1,4-naphthoquinone is found on the following regulatory lists**
Australian Inventory of Industrial Chemicals (AIIC)
International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

Additional Regulatory Information

Not Applicable

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (1,4-butanediol dimethacrylate; methylstyrene, mixed isomers; ethylene glycol dimethacrylate; 2-hydroxypropyl methacrylate; N,N-bis(2-hydroxyethyl)-p-toluidine; dipropoxy-p-toluidine; 2,2,4-trimethyl-1,3-pentanediol diisobutyrate; 1,4-naphthoquinone)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	All chemical substances in this product have been designated as TSCA Inventory 'Active'
Taiwan - TCSI	Yes
Mexico - INSQ	No (1,4-butanediol dimethacrylate; N,N-bis(2-hydroxyethyl)-p-toluidine; dipropoxy-p-toluidine)
Vietnam - NCI	Yes
Russia - FBEPH	No (dipropoxy-p-toluidine)
UAE - Control List (Banned/Restricted Substances)	No (1,4-butanediol dimethacrylate; methylstyrene, mixed isomers; ethylene glycol dimethacrylate; 2-hydroxypropyl methacrylate; N,N-bis(2-hydroxyethyl)-p-toluidine; dipropoxy-p-toluidine; 2,2,4-trimethyl-1,3-pentanediol diisobutyrate; 1,4-naphthoquinone)
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	21/05/2026
Initial Date	20/04/2020

SDS Version Summary

Version	Date of Update	Sections Updated
4.1	20/08/2021	Classification change due to full database hazard calculation/update.
5.1	21/05/2026	Expiration. Review and Update

Other information

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

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

Definitions and abbreviations

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

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