T43 Medium Strength Threadlocker #908-2749, 908-2758 (AUS)
RS Components

Chemwatch Hazard Alert Code: **3**

Chemwatch: **5420-95**
Version No: **2.1.1.1**
Safety Data Sheet according to WHS and ADG requirements

Issue Date: **28/08/2020**
Print Date: **07/09/2020**
L.GHS.AUS.EN

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

Product Identifier

Product name	T43 Medium Strength Threadlocker #908-2749, 908-2758 (AUS)
Synonyms	Not Available
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains triethylene glycol dimethacrylate and diisopropylnaphthalene)
Other means of identification	Not Available

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

Relevant identified uses	PC1: Adhesives, sealants. Use according to manufacturer's directions.

Details of the supplier of the safety data sheet

Registered company name	**RS Components**
Address	25 Pavesi Street Smithfield NSW 2164 Australia
Telephone	+1 300 656 636
Fax	+1 300 656 696
Website	www.au.rs-online.com
Email	Not Available

Emergency telephone number

Association / Organisation	**CHEMWATCH EMERGENCY RESPONSE**
Emergency telephone numbers	+61 2 9186 1132
Other emergency telephone numbers	+61 1800 951 288

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

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

ChemWatch Hazard Ratings

		Min	Max
Flammability	1		
Toxicity	2		
Body Contact	2		
Reactivity	1		
Chronic	3		

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

Poisons Schedule	Not Applicable
Classification [1]	Acute Toxicity (Inhalation) Category 4, Skin Corrosion/Irritation Category 2, Eye Irritation Category 2A, Skin Sensitizer Category 1, Carcinogenicity Category 1B, Reproductive Toxicity Category 2, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Specific target organ toxicity - repeated exposure Category 2, Acute Aquatic Hazard Category 1, Chronic Aquatic Hazard Category 1
Legend:	*1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI*

Label elements

Page 1 continued...

Hazard pictogram(s)	
Signal word	**Danger**

Hazard statement(s)

H332	Harmful if inhaled.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H350	May cause cancer.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P260	Do not breathe mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement(s) Response

P308+P313	IF exposed or concerned: Get medical advice/attention.
P321	Specific treatment (see advice on this label).
P362	Take off contaminated clothing and wash before reuse.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.

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.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
109-16-0	30-50	triethylene glycol dimethacrylate
38640-62-9	10-30	diisopropylnaphthalene
27813-02-1	2.9-10	2-hydroxypropyl methacrylate
80-15-9	1-2.9	cumyl hydroperoxide
79-10-7	<1	acrylic acid
114-83-0	<1	acetylphenylhydrazine
128-37-0	<1	2,6-di-tert-butyl-4-methylphenol
99-97-8	<1	N,N-dimethyl-p-toluidine

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.

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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.

for naphthalene intoxication: Naphthalene requires hepatic and microsomal activation prior to the production of toxic effects. Liver microsomes catalyse the initial synthesis of the reactive 1,2-epoxide intermediate which is subsequently oxidised to naphthalene dihydrodiol and alpha-naphthol. The 2-naphthoquinones are thought to produce haemolysis, the 1,2-naphthoquinones are thought to be responsible for producing cataracts in rabbits, and the glutathione-adducts of naphthalene-1,2-oxide are probably responsible for pulmonary toxicity. Suggested treatment regime:

- Induce emesis and/or perform gastric lavage with large amounts of warm water where oral poisoning is suspected.
- Instill a saline cathartic such as magnesium or sodium sulfate in water (15 to 30g).
- Demulcents such as milk, egg white, gelatin, or other protein solutions may be useful after the stomach is emptied but oils should be avoided because they promote absorption.
- If eyes/skin contaminated, flush with warm water followed by the application of a bland ointment.
- Severe anaemia, due to haemolysis, may require small repeated blood transfusions, preferably with red cells from a non-sensitive individual.
- Where intravascular haemolysis, with haemoglobinuria occurs, protect the kidneys by promoting a brisk flow of dilute urine with, for example, an osmotic diuretic such as mannitol. It may be useful to alkalinise the urine with small amounts of sodium bicarbonate but many researchers doubt whether this prevents blockage of the renal tubules.
- Use supportive measures in the case of acute renal failure. GOSSELIN, SMITH HODGE: Clinical Toxicology of Commercial Products, 5th Ed.

SECTION 5 Firefighting measures

Extinguishing media

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

Special hazards arising from the substrate or mixture

Fire Incompatibility	▸ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Advice for firefighters

Fire Fighting	▸ Alert Fire Brigade and tell them location and nature of hazard. ▸ 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.
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). Combustion products include: carbon dioxide (CO_2) nitrogen oxides (NOx) other pyrolysis products typical of burning organic material. **Contains low boiling substance:** Closed containers may rupture due to pressure buildup under fire conditions.
HAZCHEM	•3Z

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

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

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	Environmental hazard - contain spillage.

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

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	▸ **DO NOT** allow clothing wet with material to stay in contact with skin ▸ Avoid all personal contact, including inhalation. ▸ Wear protective clothing when risk of exposure occurs. ▸ Use in a well-ventilated area. ▸ Prevent concentration in hollows and sumps.
Other information	▸ Polymerisation may occur slowly at room temperature. ▸ Storage requires stabilising inhibitor content and dissolved oxygen content to be monitored. Refer to manufacturer's recommended levels. ▸ **DO NOT** overfill containers so as to maintain free head space above product. ▸ Blanketing or sparging with nitrogen or oxygen free gas will deactivate stabiliser. ▸ Store below 38 deg. C. ▸ Store in original containers. ▸ Keep containers securely sealed. ▸ No smoking, naked lights or ignition sources. ▸ Store in a cool, dry, well-ventilated area.

Conditions for safe storage, including any incompatibilities

Suitable container	▸ Polyethylene or polypropylene container. ▸ Packing as recommended by manufacturer. ▸ Check all containers are clearly labelled and free from leaks.
Storage incompatibility	▸ Avoid reaction with oxidising agents, bases and strong reducing agents. ▸ Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.

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	acrylic acid	Acrylic acid	2 ppm / 5.9 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	2,6-di-tert-butyl-4-methylphenol	2,6-Di-tert-butyl-p-cresol	10 mg/m3	Not Available	Not Available	Not Available

Emergency Limits

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
triethylene glycol dimethacrylate	Methacrylic acid, diester with triethylene glycol; (Polyester TGM3)	33 mg/m3	360 mg/m3	2,100 mg/m3
diisopropylnaphthalene	Diisopropylnaphthalene; (Bis(isopropyl)naphthalene)	5.6 mg/m3	61 mg/m3	370 mg/m3
cumyl hydroperoxide	Cumene hydroperoxide; (Isopropylbenzene hydroperoxide)	0.15 ppm	1.6 ppm	9.7 ppm
acrylic acid	Acrylic acid	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
triethylene glycol dimethacrylate	Not Available	Not Available
diisopropylnaphthalene	Not Available	Not Available
2-hydroxypropyl methacrylate	Not Available	Not Available
cumyl hydroperoxide	Not Available	Not Available
acrylic acid	Not Available	Not Available
acetylphenylhydrazine	Not Available	Not Available
2,6-di-tert-butyl-4-methylphenol	Not Available	Not Available
N,N-dimethyl-p-toluidine	Not Available	Not Available

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
triethylene glycol dimethacrylate	E	≤ 0.1 ppm
2-hydroxypropyl methacrylate	E	≤ 0.1 ppm
cumyl hydroperoxide	E	≤ 0.1 ppm
acetylphenylhydrazine	E	≤ 0.01 mg/m³
N,N-dimethyl-p-toluidine	E	≤ 0.1 ppm
Notes:	*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

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"

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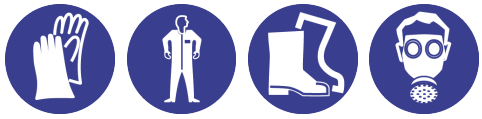
European Union (EU) List of harmonised classification and labelling hazardous substances, Table 3.1, Annex VI, Regulation (EC) No 1272/2008 (CLP) - up to the latest ATP

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.
Personal protection	
Eye and face protection	▸ Safety glasses with side shields. ▸ Chemical goggles. ▸ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.
Skin protection	See Hand protection below
Hands/feet protection	**NOTE:** ▸ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. ▸ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care. 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) 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
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.

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.

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:
"Forsberg Clothing Performance Index".
The effect(s) of the following substance(s) are taken into account in the ***computer-generated*** selection:
T43 Medium Strength Threadlocker #908-2749, 908-2758 (AUS)

Material	CPI
BUTYL	C
PE	C
SARANEX-23	C
TEFLON	C
VITON	C

* CPI - Chemwatch Performance Index

Respiratory protection

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

^ - Full-face

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A: Best Selection
B: Satisfactory; may degrade after 4 hours continuous immersion
C: Poor to Dangerous Choice for other than short term immersion
NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -
* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

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

Avoid inhalation.

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Blue liquid with a perceptible odour; does not mix with water.

Physical state	Liquid	**Relative density (Water = 1)**	1.07
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)	>35	**Molecular weight (g/mol)**	Not Applicable
Flash point (°C)	>93	**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 Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	- Unstable in the presence of incompatible materials. - Product is considered stable. - Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information

Information on toxicological effects

Inhaled	Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. 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. No report of respiratory illness in humans as a result of exposure to multifunctional acrylates has been found. Similarly evidence of systemic damage does not appear to exist. Inhalation of naphthalene vapour has been associated with headache, loss of appetite and nausea. Other conditions associated with exposure to the vapour include optic neuritis, corneal injury and kidney damage. Animals exposed to aerosols of a refined commercial solvent mixture consisting primarily of mono-methylated naphthalenes, exhibited dyspnoea. When animals were exposed to this mixture for 27 daily one-hour exposures over a 35-day period, they showed dyspnoea, listlessness, prostration and marked salivation.

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Ingestion	Accidental ingestion of the material may be damaging to the health of the individual. The substance and/or its metabolites may bind to haemoglobin inhibiting normal uptake of oxygen. This condition, known as "methaemoglobinemia", is a form of oxygen starvation (anoxia). Symptoms include cyanosis (a bluish discolouration skin and mucous membranes) and breathing difficulties. Symptoms may not be evident until several hours after exposure. Ingestion of naphthalene and its congeners may produce abdominal cramps with nausea, vomiting, diarrhoea, headache, profuse perspiration, listlessness, confusion, and in severe poisonings, coma with or without convulsions. Irritation of the urinary bladder may also occur (presumably due to the excretory products of naphthalene metabolism) and produce urgency, dysuria, and the passage of brown or black urine with or without albumin or casts. These effects may disappear within a few days and have not been associated with haemolysis which is a prominent finding in naphthalene poisoning. Severe naphthalene poisoning in humans produces haemoglobinuria, methaemoglobinaemia, the production of Heinz bodies and death.
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. Workers sensitised to naphthalene and its congeners show exfoliative dermatitis. Hypersensitivity, with positive patch tests, has been demonstrated in certain individuals. Percutaneous absorption is apparently inadequate to produce acute systemic reactions, except in new-born babies. Tests with a refined commercial liquid grade of methylnaphthalene (MN), placed under a patch for 48 hours on human skin produced slight to moderate reactions. 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. Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.
Eye	Exposure to naphthalene and its congeners has produced cataracts in animals and workers. In one study, eight of twenty-one workers, exposed to naphthalene for 5-years, showed opacities of the lens. Evidence exists, or practical experience predicts, that the material may cause severe 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. Eye contact may cause significant inflammation with pain. Corneal injury may occur; permanent impairment of vision may result unless treatment is prompt and adequate. Repeated or prolonged exposure to irritants may cause inflammation characterised by a temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.
Chronic	Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems. Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. 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. On the basis, primarily, of animal experiments, the material may be regarded as carcinogenic to humans. There is sufficient evidence to provide a strong presumption that human exposure to the material may result in cancer on the basis of: - appropriate long-term animal studies - other relevant information Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. Serious damage (clear functional disturbance or morphological change which may have toxicological significance) is likely to be caused by repeated or prolonged exposure. As a rule the material produces, or contains a substance which produces severe lesions. Such damage may become apparent following direct application in subchronic (90 day) toxicity studies or following sub-acute (28 day) or chronic (two-year) toxicity tests. Exposure to the material may cause concerns for human fertility, generally on the basis that results in animal studies provide sufficient evidence to cause a strong suspicion of impaired fertility in the absence of toxic effects, or evidence of impaired fertility occurring at around the same dose levels as other toxic effects, but which are not a secondary non-specific consequence of other toxic effects. Exposure to the material may cause concerns for humans owing to possible developmental toxic effects, generally on the basis that results in appropriate animal studies provide strong suspicion of developmental toxicity in the absence of signs of marked maternal toxicity, or at around the same dose levels as other toxic effects but which are not a secondary non-specific consequence of other toxic effects. p-Toluidine is a hepatic carcinogen in mice after chronic oral administration but the same doses are not carcinogenic in rats Most arylamines are powerful haemopoietic poisons producing methaemoglobinaemia in humans.Addition of alkyl groups may modify the toxic responses but nevertheless these remains similar to the parent compound. High chronic doses cause splenic congestion and in turn sarcoma formation. Single ring aromatic amines are relatively weak carcinogens requiring large doses to produce any effect in animal experiments. The polycyclic aromatic amines exhibit a wide range of carcinogenic activity which appear, in part, to be dependent on the position on which benzene rings are substituted and the nature of the substituent. In a two-year inhalation study, groups of mice were exposed at 0, 10 or 30 ppm naphthalene, 6 hours/day, 5 days/week for 103 weeks. Female mice showed an increase of pulmonary alveolar/bronchiolar adenomas at 30 ppm. There was no increase in the incidence of tumours in male mice. Naphthalene inhalation was associated with an increase in the incidence and severity of chronic inflammation, metaplasia of the olfactory epithelium, and hyperplasia of the respiratory epithelium in the nose, and chronic inflammation of the lungs of both sexes. Sensitisation may give severe responses to very low levels of exposure, in situations where exposure may occur.

T43 Medium Strength Threadlocker #908-2749, 908-2758 (AUS)	**TOXICITY**	**IRRITATION**
	Not Available	Not Available

triethylene glycol dimethacrylate	**TOXICITY**	**IRRITATION**
	Oral (mouse) LD50: 10750 mg/kg[2]	Eye: no adverse effect observed (not irritating)[1]
	Oral (rat) LD50: 10837 mg/kg[2]	Skin: no adverse effect observed (not irritating)[1]

diisopropylnaphthalene	**TOXICITY**	**IRRITATION**
	Oral (rat) LD50: 3900-4500 mg/kg[2]	Eye: no adverse effect observed (not irritating)[1]
		Skin: no adverse effect observed (not irritating)[1]

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2-hydroxypropyl methacrylate	**TOXICITY**	**IRRITATION**
	Oral (rat) LD50: 11,200 mg/kg[2]	Eye: adverse effect observed (irritating)[1]
	Oral (rat) LD50: 5050 mg/kg[2]	Skin: no adverse effect observed (not irritating)[1]
cumyl hydroperoxide	**TOXICITY**	**IRRITATION**
	dermal (rat) LD50: 500 mg/kg[2]	Eye (rabbit): 1 mg
	Inhalation (rat) LC50: 219.74898 mg/l/4hg[2]	Skin (rabbit): 500 mg - mild
	Oral (rat) LD50: 382 mg/kg[2]	
acrylic acid	**TOXICITY**	**IRRITATION**
	~140 mg/kg[2]	Not Available
	~16.2 mg/kg[2]	
	~23.6 mg/kg[2]	
	144 mg/kg[2]	
	1590 mg/kg[2]	
	24 mg/kg[2]	
	Inhalation (mouse) LC50: 2.65 mg/l/2h[2]	
	mg/kg[2]	
	Oral (rabbit) LD50: =250 mg/kg[2]	
	Oral (rat) LD50: =1250 mg/kg[2]	
	Oral (rat) LD50: =1350 mg/kg[2]	
	Oral (rat) LD50: =2520 mg/kg[2]	
	Oral (rat) LD50: =33.5 mg/kg[2]	
	Oral (rat) LD50: =360 mg/kg[2]	
	Oral (rat) LD50: 151-526 mg/kg[2]	
acetylphenylhydrazine	**TOXICITY**	**IRRITATION**
	Oral (mouse) LD50: 270 mg/kg[2]	Not Available
2,6-di-tert-butyl-4-methylphenol	**TOXICITY**	**IRRITATION**
	=10700 mg/kg[2]	Eye (rabbit): 100 mg/24h-moderate
	=2500 mg/kg[2]	Eye: no adverse effect observed (not irritating)[1]
	138-1739 mg/kg[2]	Skin (human): 500 mg/48h - mild
	200 mg/kg[2]	Skin (rabbit):500 mg/48h-moderate
	3550 mg/kg[2]	Skin: no adverse effect observed (not irritating)[1]
	400 mg/kg[2]	
	80 mg/kg[2]	
	8000 mg/kg[2]	
	940-2100 mg/kg[2]	
	Dermal (rabbit) LD50: >2000 mg/kg[2]	
	Oral (mouse) LD50: =1800 mg/kg[2]	
	Oral (mouse) LD50: =2000 mg/kg[2]	
	Oral (rabbit) LD50: =3200 mg/kg[2]	
	Oral (rat) LD50: =1906 mg/kg[2]	
	Oral (rat) LD50: =1970 mg/kg[2]	
	Oral (rat) LD50: =2255 mg/kg[2]	
	Oral (rat) LD50: =5800 mg/kg[2]	
	Oral (rat) LD50: >10000 mg/kg[2]	
	Oral (rat) LD50: >2000 mg/kg[2]	
	Oral (rat) LD50: 890 mg/kg[2]	
N,N-dimethyl-p-toluidine	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: >2000 mg/kg[2]	Not Available
	Inhalation (rat) LC50: 1.4 mg/l/4H[2]	
	Oral (rat) LD50: 980 mg/kg[2]	

Legend: *1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise*

Continued...

	specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

DIISOPROPYLNAPHTHALENE	A single oral dose toxicity test in rats revealed an LD50 value of more than 2000 mg/kg for bis(1-methylethyl)naphthalene in both sexes. Bis(1-methylethyl)naphthalene was studied for oral toxicity in rats in a 28-day repeat dose toxicity test at doses of 0, 30, 100, 300, and 1000mg/kg/day. Five of the 12 males and 6 of the 12 females died in the 1000 mg/kg group. With regard to general signs, adoption of a lateral position, decrease in locomotor activity, abnormal gait, piloerection, and soiled fur were noted in males of the 1000 mg/kg group, and soiled fur was noted in females of the 1000 mg/kg group. Suppression of body weight gain and decreased food consumption were also noted in both sexes of the 1000 mg/kg group. On hematological examination, the following changes were noted: increases in APTT and PT in males of the 300 mg/kg group; an increase in APTT in females of the 300 mg/kg group; increases in the platelet count, PT, APTT, and fibrinogen concentration and decreases in the red blood cell count and hematocrit in males of the 1000 mg/kg group; and increases in the white blood cell count, APTT, fibrinogen concentration, and neutrophil ratio and a decrease in the lymphocyte ratio in females of the 1000 mg/kg group. On blood chemical examination, the following changes were noted: increases in total cholesterol in females of the 30 and 100 mg/kg groups; an increase in total bilirubin and a decrease in triglyceride in males of the 300 mg/kg group; increases in total bilirubin and total cholesterol in the females of the 300 mg/kg group; increases in GPT, ?-GTP, total bilirubin, and total cholesterol and a decrease in triglyceride in males of the 1000 mg/kg group; and increases in GPT, ?-GTP, total bilirubin, urea nitrogen, creatinine, total cholesterol, and triglyceride in females of the 1000 mg/kg group. At necropsy, hypertrophy of the liver was noted in both sexes of the 300 and 1000 mg/kg groups. With regard to organ weights, the following changes were noted: increases in the absolute and relative liver weights in males of the 100, 300, and 1000 mg/kg groups and in females of the 300 and 1000 mg/kg groups; increased relative kidney weights in males of the 1000 mg/kg group; increased absolute and relative kidney weights in females of the 300 and 1000 mg/kg groups; and increased absolute and relative adrenal weights in females of the 1000 mg/kg group. On histopathological examination, the following changes were noted: centrilobular hypertrophy of hepatocytes in females of the 300 mg/kg group; whole lobular hypertrophy of hepatocytes in males of the 1000 mg/kg group; centrilobular hypertrophy of hepatocytes in both sexes of the 1000 mg/kg group; renal basophilic tubules in males of the 1000 mg/kg group; and neutrophil infiltration in the renal papilla, renal basophililc tubules, and dilatation of renal tubules in females of the 1000 mg/kg group. Therefore, the NOELs for the 28-day repeat dose oral toxicity are considered to be 30 mg/kg/day for males, and less than 30 mg/kg/day for females. Bis(1-methylethyl)naphthalene was not mutagenic in Salmonella typhimurium TA100, TA1535, TA98, TA1537 and Escherichia coli WP2 uvrA, with or without an exogenous metabolic activation system. Bis(1-methylethyl)naphthalene induced structural chromosomal aberrations in CHL cells after short-term treatment with an exogenous metabolic activation system.
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 Monalkyl 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 *de facto* carcinogens. 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
CUMYL HYDROPEROXIDE	Bacterial cell mutagen Equivocal tumorigen by RTECS criteria The material may produce moderate eye irritation leading to 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 epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.
ACRYLIC ACID	For acrylic acid: **Acute toxicity:** Acrylic acid is absorbed via the lungs in animals and humans, absorption via the oral and dermal routes of exposure is demonstrated. In animals with solely nasal respiration, it is resorbed at the nasal mucosa. The extent of absorption depends on pH and solvent with direct dependence on substance concentration. In mice acrylic acid is rapidly and completely metabolised mainly in liver and kidney via the normal catabolic pathways of beta-oxidation. The material may produce severe 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) thickening of the epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis. Prolonged contact is unlikely, given the severity of response, but repeated exposures may produce severe ulceration.
ACETYLPHENYLHYDRAZINE	Tumorigenic - Neoplastic by RTECS criteria.
2,6-DI-TERT-BUTYL-4-METHYLPHENOL	for bridged alkyl phenols: **Acute toxicity:** Acute oral and dermal toxicity data are available for all but two of the substances in the group. The data show that acute toxicity of these substances is low. The testing for acute toxicity spans five decades **Repeat dose toxicity:** Repeat dose studies on the members of this category include both subchronic and chronic exposures. The liver is identified as the target organ in rats for all of the substances tested. 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 spongy layer (spongiosis) and intracellular oedema of the epidermis. For hindered phenols: Available data shows that acute toxicity of these substances is low. **Mutagenicity.** Data from bacterial reverse mutation assays and *in vitro* and *in vivo* chromosome aberration studies were reviewed. All assays, with and without metabolic activation, were negative. The weight of evidence for mutagenic potential for this category indicates these substances are not mutagenic. **In Vitro Chromosome Aberration Studies.** In vitro chromosome aberration studies are available for several members All except 2,6-di-tert-butyl-p-cresol were negative **In Vivo Chromosome Aberration Studies.** In vivo studies evaluating chromosome damage are available for six of the hindered phenols. All in vivo evaluations were negative. **Repeated Dose Toxicity**. Repeated dose toxicity data of approximately three months (90-day, 12- and 13-week) are available for some of the substances in this group. The substance is classified by IARC as Group 3: **NOT** classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing. **NOTE:** Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA. * Degussa SDS Effects such as behavioral changes, reduction in body weight gain, and decrement in body weight have been observed after long-term administration of BHT to mice and rats. Toxic effects may be attributed more to BHT metabolites than to their parent compound, only a few studies have focused on their carcinogenicity and toxicity, and not only on that of BHT. The metabolite BHT-QM (syn: 2,6-di-tert-butyl-1,4-methylene-2,5-cyclohexadien-1-one, CAS RN: 2607-52-5) is a very reactive compound which is considered to play a significant role in hepatoxicity, pneumotoxicity, and skin tumor promotion in mice. In addition, it was reported that another quinone derivative, BHT-OH(t)QM (syn 2-tert-butyl-6-(2-hydroxy-tert-butyl-4-methylene-2,5-cyclohexadien-1-one, CAS RN: 124755-19-7), is chemically more reactive than BHT-QM, and

Continued...

	it has been recognized as the principal metabolite responsible for lung tumor promotion activity of BHT in mice. BHT has been reported to exert prooxidant effects under certain conditions. Thus, when BHT was added in excess to a wheat seedling medium in aerobic conditions, an enhancement of the generation rate of superoxide anion was observed. This is a reactive particle that may damage cellular structures at high concentrations In addition, an increase in hepatic microsomal lipid peroxidation was observed in rats fed with diets containing 0.2% of BHT for 30 days. Due to this ability of BHT to exert prooxidant effects at high concentrations, it has been used to induce experimental models of oxidative stress in several animals and fungi in order to study the protective effects of other compounds. Some authors have reported that at high aeration rate, BHT can react with molecular oxygen rather than with the reactive oxygen species present, yielding BHT-phenoxyl radical and superoxide anion. In addition, the phenolic radical itself may undergo redox recycling which can be a critical factor depending on the reductant involved However, it has to be noted that BHT-phenoxyl radical has been reported to be relatively stable. Furthermore, the potential reactivity of BHT-derived metabolites should be taken into account; some studies reported that not only BHT but also its metabolites, such as BHT-Q and BHT-QM, can act as prooxidant. As BHT undergoes several reactions during biotransformation, a large number of intermediate metabolites have been identified. However, their nature and concentration depend on the environmental conditions and on the animal species. Although the changes undergone by BHT during in vivo digestion processes have not been studied, after submission of a fluid deep-frying fat containing BHT and BHT-QM to an in vitro gastrointestinal digestion model, both these were detected in the digested samples. These results indicate that BHT and its toxic metabolite could remain bioaccessible for intestinal absorption. Studies concerning BHT metabolism have shown that, unlike other synthetic antioxidants, BHT is a potent inducer of the microsomal monooxygenase system and its major route of degradation is oxidation catalyzed by cytochrome P450. Studies have reported potential toxicity derived from the ingestion or administration of BHT. As for acute oral toxicity, although this is considered low in animals, it must be noted that 2 clinical cases were reported in patients who suffered acute neurotoxicity and gastritis after ingesting a high dose of BHT (4 and 80 g without medical prescription) to cure recurrent genital herpes. Regarding short-term subchronic toxicity studies, it has been reported that BHT causes dose-related increase in the incidence and severi
N,N-DIMETHYL-P-TOLUIDINE	**WARNING:** This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.
TRIETHYLENE GLYCOL DIMETHACRYLATE & 2-HYDROXYPROPYL METHACRYLATE & ACETYLPHENYLHYDRAZINE	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.
TRIETHYLENE GLYCOL DIMETHACRYLATE & 2-HYDROXYPROPYL METHACRYLATE & CUMYL HYDROPEROXIDE & ACRYLIC ACID & ACETYLPHENYLHYDRAZINE & 2,6-DI-TERT-BUTYL-4-METHYLPHENOL	Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS.

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

T43 Medium Strength Threadlocker #908-2749, 908-2758 (AUS)

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

triethylene glycol dimethacrylate

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96	Fish	16.4mg/L	2
EC50	72	Algae or other aquatic plants	72.8mg/L	2
NOEC	72	Algae or other aquatic plants	18.6mg/L	2

diisopropylnaphthalene

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96	Fish	>0.5mg/L	2
EC50	48	Crustacea	>0.16mg/L	2
NOEC	504	Crustacea	0.0118mg/L	2

2-hydroxypropyl methacrylate

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96	Fish	833mg/L	2
EC50	48	Crustacea	>143mg/L	2
EC50	72	Algae or other aquatic plants	>1-260mg/L	2
NOEC	504	Crustacea	45.2mg/L	2

cumyl hydroperoxide

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96	Fish	3.9mg/L	2
EC50	48	Crustacea	18.84mg/L	2
NOEC	96	Fish	1.5mg/L	2

Continued...

acrylic acid	**Endpoint**	**Test Duration (hr)**	**Species**	**Value**	**Source**
	LC50	96	Fish	>1-mg/L	2
	EC50	48	Crustacea	27.9mg/L	2
	EC50	72	Algae or other aquatic plants	0.04mg/L	2
	EC10	72	Algae or other aquatic plants	=0.01mg/L	1
	NOEC	72	Algae or other aquatic plants	=0.008mg/L	1
acetylphenylhydrazine	**Endpoint**	**Test Duration (hr)**	**Species**	**Value**	**Source**
	Not Available	Not Available	Not Available	Not Available	Not Available
2,6-di-tert-butyl-4-methylphenol	**Endpoint**	**Test Duration (hr)**	**Species**	**Value**	**Source**
	LC50	96	Fish	0.199mg/L	2
	EC50	48	Crustacea	>0.17mg/L	2
	EC50	72	Algae or other aquatic plants	>0.24mg/L	2
	NOEC	504	Crustacea	0.023mg/L	2
N,N-dimethyl-p-toluidine	**Endpoint**	**Test Duration (hr)**	**Species**	**Value**	**Source**
	LC50	96	Fish	24.335mg/L	2
	EC50	48	Crustacea	13.7mg/L	2
	EC50	96	Algae or other aquatic plants	15.481mg/L	2
Legend:	*Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*				

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.
Wastes resulting from use of the product must be disposed of on site or at approved waste sites.
for naphthalene:
Environmental fate:
Naphthalene released to the atmosphere may be transported to surface water and/or soil by wet or dry deposition. Since most airborne naphthalene is in the vapor phase, deposition is expected to be very slow (about 0.04–0.06 cm/sec). It has been estimated that about 2–3% of naphthalene emitted to air is transported to other environmental media, mostly by dry deposition .
Naphthalene in surface water may volatilise to the atmosphere.
DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
triethylene glycol dimethacrylate	LOW	LOW
diisopropylnaphthalene	HIGH	HIGH
2-hydroxypropyl methacrylate	LOW	LOW
cumyl hydroperoxide	LOW (Half-life = 56 days)	LOW (Half-life = 5.42 days)
acrylic acid	HIGH (Half-life = 180 days)	LOW (Half-life = 0.99 days)
acetylphenylhydrazine	HIGH	HIGH
2,6-di-tert-butyl-4-methylphenol	HIGH	HIGH
N,N-dimethyl-p-toluidine	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
triethylene glycol dimethacrylate	LOW (LogKOW = 1.88)
diisopropylnaphthalene	LOW (BCF = 203)
2-hydroxypropyl methacrylate	LOW (BCF = 3.2)
cumyl hydroperoxide	LOW (BCF = 35.5)
acrylic acid	LOW (LogKOW = 0.35)
acetylphenylhydrazine	LOW (LogKOW = 0.7365)
2,6-di-tert-butyl-4-methylphenol	HIGH (BCF = 2500)
N,N-dimethyl-p-toluidine	LOW (LogKOW = 2.81)

Mobility in soil

Ingredient	Mobility
triethylene glycol dimethacrylate	LOW (KOC = 10)
diisopropylnaphthalene	LOW (KOC = 44820)
2-hydroxypropyl methacrylate	LOW (KOC = 10)
cumyl hydroperoxide	LOW (KOC = 2346)

Continued...

Ingredient	Mobility
acrylic acid	HIGH (KOC = 1.201)
acetylphenylhydrazine	LOW (KOC = 70.29)
2,6-di-tert-butyl-4-methylphenol	LOW (KOC = 23030)
N,N-dimethyl-p-toluidine	LOW (KOC = 124.8)

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal	▸ Containers may still present a chemical hazard/ danger when empty. ▸ Return to supplier for reuse/ recycling if possible. Otherwise: ▸ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. ▸ Where possible retain label warnings and SDS and observe all notices pertaining to the product. Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate: ▸ Reduction ▸ Reuse ▸ Recycling ▸ Disposal (if all else fails) This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. ▸ **DO NOT** allow wash water from cleaning or process equipment to enter drains. ▸ It may be necessary to collect all wash water for treatment before disposal. ▸ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. ▸ Where in doubt contact the responsible authority. ▸ Recycle wherever possible or consult manufacturer for recycling options. ▸ Consult State Land Waste Authority for disposal. ▸ Bury or incinerate residue at an approved site. ▸ Recycle containers if possible, or dispose of in an authorised landfill.

SECTION 14 Transport information

Labels Required

	
Marine Pollutant	
HAZCHEM	•3Z

Land transport (ADG)

UN number	3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains triethylene glycol dimethacrylate and diisopropylnaphthalene)
Transport hazard class(es)	Class: 9 Subrisk: Not Applicable
Packing group	III
Environmental hazard	Environmentally hazardous
Special precautions for user	Special provisions: 274 331 335 375 AU01 Limited quantity: 5 L

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082
are not subject to this Code when transported by road or rail in;
(a) packagings;
(b) IBCs; or
(c) any other receptacle not exceeding 500 kg(L).
- Australian Special Provisions (SP AU01) - ADG Code 7th Ed.

Air transport (ICAO-IATA / DGR)

UN number	3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. * (contains triethylene glycol dimethacrylate and diisopropylnaphthalene)
Transport hazard class(es)	ICAO/IATA Class: 9 ICAO / IATA Subrisk: Not Applicable

Continued...

	ERG Code: 9L
Packing group	III
Environmental hazard	Environmentally hazardous
Special precautions for user	Special provisions: A97 A158 A197 Cargo Only Packing Instructions: 964 Cargo Only Maximum Qty / Pack: 450 L Passenger and Cargo Packing Instructions: 964 Passenger and Cargo Maximum Qty / Pack: 450 L Passenger and Cargo Limited Quantity Packing Instructions: Y964 Passenger and Cargo Limited Maximum Qty / Pack: 30 kg G

Sea transport (IMDG-Code / GGVSee)

UN number	3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains triethylene glycol dimethacrylate and diisopropylnaphthalene)
Transport hazard class(es)	IMDG Class: 9 IMDG Subrisk: Not Applicable
Packing group	III
Environmental hazard	Marine Pollutant
Special precautions for user	EMS Number: F-A , S-F Special provisions: 274 335 969 Limited Quantities: 5 L

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

Not Applicable

SECTION 15 Regulatory information

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

triethylene glycol dimethacrylate is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

diisopropylnaphthalene is found on the following regulatory lists

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)

cumyl hydroperoxide is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australian Inventory of Industrial Chemicals (AIIC)

acrylic acid is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australian Inventory of Industrial Chemicals (AIIC)
Chemical Footprint Project - Chemicals of High Concern List
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
United Nations List of Prior Informed Consent Chemicals

acetylphenylhydrazine 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 6
Australian Inventory of Industrial Chemicals (AIIC)
Chemical Footprint Project - Chemicals of High Concern List

2,6-di-tert-butyl-4-methylphenol is found on the following regulatory lists

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 2
Australian Inventory of Industrial Chemicals (AIIC)
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

N,N-dimethyl-p-toluidine 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)
Chemical Footprint Project - Chemicals of High Concern List
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B : Possibly carcinogenic to humans

National Inventory Status

National Inventory	Status
Australia - AIIC	Yes

Continued...

National Inventory	Status
Australia Non-Industrial Use	No (triethylene glycol dimethacrylate; diisopropylnaphthalene; 2-hydroxypropyl methacrylate; cumyl hydroperoxide; acrylic acid; acetylphenylhydrazine; 2,6-di-tert-butyl-4-methylphenol; N,N-dimethyl-p-toluidine)
Canada - DSL	Yes
Canada - NDSL	No (triethylene glycol dimethacrylate; 2-hydroxypropyl methacrylate; cumyl hydroperoxide; acrylic acid; acetylphenylhydrazine; N,N-dimethyl-p-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 (diisopropylnaphthalene; acetylphenylhydrazine)
Vietnam - NCI	Yes
Russia - ARIPS	Yes
Legend:	*Yes = All CAS declared ingredients are on the inventory* *No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)*

SECTION 16 Other information

Revision Date	28/08/2020
Initial Date	28/08/2020

Other information

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

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

Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average
PC—STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit。
IDLH: Immediately Dangerous to Life or Health Concentrations
OSF: Odour Safety Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index