



R48 High Strength Retainer #908-2745 (AUS)

RS Components

Chemwatch: 5420-94

Version No: 2.1.1.1

Safety Data Sheet according to WHS and ADG requirements

Chemwatch Hazard Alert Code: 4

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	R48 High Strength Retainer #908-2745 (AUS)
Synonyms	Not Available
Proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (contains acrylic acid)
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.
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Details of the supplier of the safety data sheet

Registered company name	RS Components
Address	25 Pavese 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 preferred 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	4	
Reactivity	2	
Chronic	3	

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

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

Label elements

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

H290	May be corrosive to metals.
H332	Harmful if inhaled.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H350	May cause cancer.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
AUH018	In use, may form flammable/explosive vapour/air mixture.

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

P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.

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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SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
9065-11-6	10-30	acrylic resin
109-16-0	10-30	triethylene glycol dimethacrylate
27813-02-1	10-30	2-hydroxypropyl methacrylate
79-10-7	2.9-10	acrylic acid
15625-89-5	1-2.9	trimethylolpropane triacrylate
25852-47-5	1-2.9	polyethylene glycol dimethacrylate
80-15-9	1-2.9	cumyl hydroperoxide
114-83-0	<1	acetylphenylhydrazine
99-97-8	<1	N,N-dimethyl-p-toluidine
150-76-5	<1	4-methoxyphenol (MEHQ)

SECTION 4 First aid measures

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: ▶ Immediately hold eyelids apart and flush the eye continuously with running water. ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
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	- Transport to hospital or doctor without delay. - Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin or hair contact occurs: - Immediately flush body and clothes with large amounts of water, using safety shower if available. - Quickly remove all contaminated clothing, including footwear. - Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. - Transport to hospital, or doctor.
Inhalation	- If fumes or combustion products are inhaled remove from contaminated area. - Lay patient down. Keep warm and rested. - Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. - Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. - Transport to hospital, or doctor, without delay. - Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema. - Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs). - As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested. - Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered. This must definitely be left to a doctor or person authorised by him/her. (ICSC13719)
Ingestion	- For advice, contact a Poisons Information Centre or a doctor at once. - Urgent hospital treatment is likely to be needed. 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. - Transport to hospital or doctor without delay.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

The material may induce methaemoglobinaemia following exposure.

- Initial attention should be directed at oxygen delivery and assisted ventilation if necessary. Hyperbaric oxygen has not demonstrated substantial benefits.
- Hypotension should respond to Trendelenburg's position and intravenous fluids; otherwise dopamine may be needed.
- Symptomatic patients with methaemoglobin levels over 30% should receive methylene blue. (Cyanosis, alone, is not an indication for treatment). The usual dose is 1-2 mg/kg of a 1% solution (10 mg/ml) IV over 50 minutes; repeat, using the same dose, if symptoms of hypoxia fail to subside within 1 hour.
- Thorough cleansing of the entire contaminated area of the body, including the scalp and nails, is of utmost importance.

BIOLOGICAL EXPOSURE INDEX - BEI

These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

Determinant	Index	Sampling Time	Comment
1. Methaemoglobin in blood	1.5% of haemoglobin	During or end of shift	B, NS, SQ

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

NS: Non-specific determinant; also observed after exposure to other materials

SQ: Semi-quantitative determinant - Interpretation may be ambiguous; should be used as a screening test or confirmatory test.

For acute or short term repeated exposures to strong acids:

- Airway problems may arise from laryngeal edema and inhalation exposure. Treat with 100% oxygen initially.
- Respiratory distress may require cricothyroidotomy if endotracheal intubation is contraindicated by excessive swelling
- Intravenous lines should be established immediately in all cases where there is evidence of circulatory compromise.
- Strong acids produce a coagulation necrosis characterised by formation of a coagulum (eschar) as a result of the desiccating action of the acid on proteins in specific tissues.

INGESTION:

- Immediate dilution (milk or water) within 30 minutes post ingestion is recommended.
- DO NOT attempt to neutralise the acid since exothermic reaction may extend the corrosive injury.**
- Be careful to avoid further vomit since re-exposure of the mucosa to the acid is harmful. Limit fluids to one or two glasses in an adult.
- Charcoal has no place in acid management.
- Some authors suggest the use of lavage within 1 hour of ingestion.

SKIN:

- Skin lesions require copious saline irrigation. Treat chemical burns as thermal burns with non-adherent gauze and wrapping.
- Deep second-degree burns may benefit from topical silver sulfadiazine.

EYE:

- Eye injuries require retraction of the eyelids to ensure thorough irrigation of the conjunctival cul-de-sacs. Irrigation should last at least 20-30 minutes. **DO NOT use neutralising agents or any other additives.** Several litres of saline are required.
- Cycloplegic drops, (1% cyclopentolate for short-term use or 5% homatropine for longer term use) antibiotic drops, vasoconstrictive agents or artificial tears may be indicated dependent on the severity of the injury.
- Steroid eye drops should only be administered with the approval of a consulting ophthalmologist).

[Ellenhorn and Barceloux: Medical Toxicology]

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
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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.
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	- Wear full body protective clothing with breathing apparatus. - Prevent, by any means available, spillage from entering drains or water course.
Fire/Explosion Hazard	WARNING: In use may form flammable/ explosive vapour-air mixtures. - Combustible. - Slight fire hazard when exposed to heat or flame. - Acids may react with metals to produce hydrogen, a highly flammable and explosive gas. - Heating may cause expansion or decomposition leading to violent rupture of containers. Combustion products include: carbon monoxide (CO) carbon dioxide (CO₂) nitrogen oxides (NO_x) other pyrolysis products typical of burning organic material. Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions. May emit clouds of acrid smoke
HAZCHEM	2X

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	- Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material. - Check regularly for spills and leaks. - 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.

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. - Avoid contact with moisture.
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	For acrylates or methacrylates: Storage tanks and pipes should be made of stainless steel or aluminium. Although they do not corrode carbon steel, there is a risk of contamination if corrosion does occur. DO NOT use aluminium or galvanised containers - Check regularly for spills and leaks - Lined metal can, lined metal pail/ can. - Plastic pail. - Polyliner drum. - Packing as recommended by manufacturer. For low viscosity materials - Drums and jerricans must be of the non-removable head type. - Where a can is to be used as an inner package, the can must have a screwed enclosure. For materials with a viscosity of at least 2680 cSt. (23 deg. C) and solids (between 15 C deg. and 40 deg C.): - Removable head packaging; - Cans with friction closures and - low pressure tubes and cartridges may be used.
Storage incompatibility	- 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

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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/m ³	Not Available	Not Available	Not Available
Australia Exposure Standards	4-methoxyphenol (MEHQ)	4-Methoxyphenol	5 mg/m ³	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/m ³	360 mg/m ³	2,100 mg/m ³
acrylic acid	Acrylic acid	Not Available	Not Available	Not Available
polyethylene glycol dimethacrylate	Polyethylene glycol dimethacrylate	30 mg/m ³	330 mg/m ³	2,000 mg/m ³
cumyl hydroperoxide	Cumene hydroperoxide; (Isopropylbenzene hydroperoxide)	0.15 ppm	1.6 ppm	9.7 ppm
4-methoxyphenol (MEHQ)	Methoxyphenol, p-	15 mg/m ³	49 mg/m ³	320 mg/m ³

Ingredient	Original IDLH	Revised IDLH
acrylic resin	Not Available	Not Available
triethylene glycol dimethacrylate	Not Available	Not Available
2-hydroxypropyl methacrylate	Not Available	Not Available
acrylic acid	Not Available	Not Available
trimethylolpropane triacrylate	Not Available	Not Available
polyethylene glycol dimethacrylate	Not Available	Not Available
cumyl hydroperoxide	Not Available	Not Available
acetylphenylhydrazine	Not Available	Not Available
N,N-dimethyl-p-toluidine	Not Available	Not Available
4-methoxyphenol (MEHQ)	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
trimethylolpropane triacrylate	E	≤ 0.1 ppm
polyethylene glycol dimethacrylate	E	≤ 0.1 ppm
cumyl hydroperoxide	E	≤ 0.1 ppm
acetylphenylhydrazine	E	≤ 0.01 mg/m ³
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.

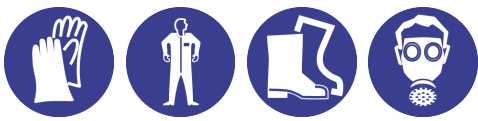
MATERIAL DATA

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"

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

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- ▶ Elbow length PVC gloves
- ▶ When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.

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:

Hands/feet protection**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 tactility ("feel"), powder-free
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.
- ▶ PVC Apron.
- ▶ PVC protective suit may be required if exposure severe.
- ▶ Eyewash unit.

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:

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

* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

Respiratory protection

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

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

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

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

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), 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.

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SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Green liquid with a sweet smelling odour; does not mix with water.		
Physical state	Liquid	Relative density (Water = 1)	1.08
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)	0.1333	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	10

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	► Polymerisation may occur at elevated temperatures. ► Polymerisation may be accompanied by generation of heat as exotherm. ► Process is self accelerating as heating causes more rapid polymerisation. ► Exotherm may cause boiling with generation of acid, toxic and flammable vapour. ► Contact with alkaline material liberates heat
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. Acidic corrosives produce respiratory tract irritation with coughing, choking and mucous membrane damage. Symptoms of exposure may include dizziness, headache, nausea and weakness. In more severe exposures, pulmonary oedema may be evident either immediately or after a latent period of 5-72 hours. Symptoms of pulmonary oedema include a tightness in the chest, dyspnoea, frothy sputum and cyanosis. Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo. 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. Acrylic acid vapour has a pronounced respiratory irritation effect and gives some warning of exposure. If irritation occurs seek to reduce exposure with ventilation, other control measures or use P.P.E., otherwise evacuate area. The gastrointestinal tract is the major site of absorption of inhaled acrylic acid. Absorption involves dissolution in the mucous of the upper airways followed by mucociliary transport and finally ingestion. Inhalation hazard is increased at higher temperatures.
Ingestion	Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual. Ingestion of acidic corrosives may produce circumoral burns with a distinct discolouration of the mucous membranes of the mouth, throat and oesophagus. Immediate pain and difficulties in swallowing and speaking may also be evident. Oedema of the epiglottis may produce respiratory distress and possibly, asphyxia. Nausea, vomiting, diarrhoea and a pronounced thirst may occur. 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.
Skin Contact	Skin contact with acidic corrosives may result in pain and burns; these may be deep with distinct edges and may heal slowly with the formation of scar tissue. Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. All multifunctional acrylates (MFA) produce skin discomfort and are known or suspected skin sensitizers. 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, hydrogen-transfer agents, stabilisers, surfactants, fillers and polymerisation inhibitors, toxic effects may arise due to a range of chemical actions. The material is a vesicant causing blistering on contact.

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	Acrylic acid is a definite skin sensitiser by the guinea pig maximisation test but not by the Draize method 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. 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.
Eye	When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation. Irritation of the eyes may produce a heavy secretion of tears (lachrymation).
Chronic	Repeated or prolonged exposure to acids may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue. Gastrointestinal disturbances may also occur. Chronic exposures may result in dermatitis and/or conjunctivitis. 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 Toxic: 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. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. 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. Sensitisation may give severe responses to very low levels of exposure, in situations where exposure may occur.

R48 High Strength Retainer #908-2745 (AUS)	TOXICITY	IRRITATION
	Not Available	Not Available
acrylic resin	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]
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]
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]	
trimethylolpropane triacrylate	TOXICITY	IRRITATION
	Oral (rat) LD50: >5000 mg/kg ^[2]	Eye (rabbit): 100 mg Moderate

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		Eye: adverse effect observed (irritating) ^[1]
		Skin (human): 1% Primary Irritant
		Skin (rabbit): 500 mg/24h Moderate
		Skin: adverse effect observed (irritating) ^[1]
polyethylene glycol dimethacrylate	TOXICITY	IRRITATION
	Oral (rat) LD50: >10000 mg/kg ^[2]	Eye - Severe irritant
		Skin - Severe irritant
cumyl hydroperoxide	TOXICITY	IRRITATION
	dermal (rat) LD50: 500 mg/kg ^[2]	Eye (rabbit): 1 mg
	Inhalation (rat) LC50: 219.74898 mg/l/4h ^[2]	Skin (rabbit): 500 mg - mild
	Oral (rat) LD50: 382 mg/kg ^[2]	
acetylphenylhydrazine	TOXICITY	IRRITATION
	Oral (mouse) LD50: 270 mg/kg ^[2]	Not Available
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]	
4-methoxyphenol (MEHQ)	TOXICITY	IRRITATION
	Oral (rat) LD50: 1600 mg/kg ^[2]	Skin (rabbit): 6000 mg/12d-I mild
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	

ACRYLIC RESIN	No significant acute toxicological data identified in literature search.
	CAUTION: The chronic health effects of acrylic monomers are under review.
	Use good occupational work practices to avoid personal contact.
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
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.
TRIMETHYLOLPROPANE TRIACRYLATE	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.
POLYETHYLENE GLYCOL DIMETHACRYLATE	The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
CUMYL HYDROPEROXIDE	Bacterial cell mutagen Equivocal tumorigen by RTECS criteria
ACETYLPHENYLHYDRAZINE	Tumorigenic - Neoplastic by RTECS criteria.
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 & TRIMETHYLOLPROPANE TRIACRYLATE & ACETYLPHENYLHYDRAZINE & 4-METHOXYPHENOL (MEHQ)	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 & ACRYLIC ACID & TRIMETHYLOLPROPANE TRIACRYLATE & POLYETHYLENE GLYCOL DIMETHACRYLATE & CUMYL HYDROPEROXIDE & ACETYLPHENYLHYDRAZINE	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.

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2-HYDROXYPROPYL METHACRYLATE & TRIMETHYLOLPROPANE TRIACRYLATE & POLYETHYLENE GLYCOL DIMETHACRYLATE	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 (CH ₂ =CHCOO or CH ₂ =C(CH ₃)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.
ACRYLIC ACID & POLYETHYLENE GLYCOL DIMETHACRYLATE	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.
TRIMETHYLOLPROPANE TRIACRYLATE & POLYETHYLENE 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.
TRIMETHYLOLPROPANE TRIACRYLATE & CUMYL HYDROPEROXIDE	The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
CUMYL HYDROPEROXIDE & 4-METHOXYPHENOL (MEHQ)	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.

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

R48 High Strength Retainer #908-2745 (AUS)	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
acrylic resin	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
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
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
trimethylolpropane triacrylate	Endpoint	Test Duration (hr)	Species	Value	Source
	LC50	96	Fish	0.87mg/L	2
	EC50	96	Algae or other aquatic plants	4.86mg/L	2

Continued...

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	NOEC	96	Fish	0.89mg/L	2
polyethylene glycol dimethacrylate	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
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
acetylphenylhydrazine	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
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
4-methoxyphenol (MEHQ)	Endpoint	Test Duration (hr)	Species	Value	Source
	LC50	96	Fish	28.5mg/L	2
	EC50	48	Crustacea	3mg/L	2
	EC50	72	Algae or other aquatic plants	19mg/L	2
	NOEC	504	Crustacea	0.68mg/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					

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.

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
triethylene glycol dimethacrylate	LOW	LOW
2-hydroxypropyl methacrylate	LOW	LOW
acrylic acid	HIGH (Half-life = 180 days)	LOW (Half-life = 0.99 days)
trimethylolpropane triacrylate	LOW	LOW
cumyl hydroperoxide	LOW (Half-life = 56 days)	LOW (Half-life = 5.42 days)
acetylphenylhydrazine	HIGH	HIGH
N,N-dimethyl-p-toluidine	HIGH	HIGH
4-methoxyphenol (MEHQ)	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
triethylene glycol dimethacrylate	LOW (LogKOW = 1.88)
2-hydroxypropyl methacrylate	LOW (BCF = 3.2)
acrylic acid	LOW (LogKOW = 0.35)
trimethylolpropane triacrylate	LOW (LogKOW = 2.8628)
cumyl hydroperoxide	LOW (BCF = 35.5)
acetylphenylhydrazine	LOW (LogKOW = 0.7365)
N,N-dimethyl-p-toluidine	LOW (LogKOW = 2.81)
4-methoxyphenol (MEHQ)	LOW (LogKOW = 1.58)

Mobility in soil

Ingredient	Mobility
triethylene glycol dimethacrylate	LOW (KOC = 10)
2-hydroxypropyl methacrylate	LOW (KOC = 10)
acrylic acid	HIGH (KOC = 1.201)
trimethylolpropane triacrylate	LOW (KOC = 1916)
cumyl hydroperoxide	LOW (KOC = 2346)

Continued...

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Ingredient	Mobility
acetylphenylhydrazine	LOW (KOC = 70.29)
N,N-dimethyl-p-toluidine	LOW (KOC = 124.8)
4-methoxyphenol (MEHQ)	LOW (KOC = 190.8)

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. - Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified. - Treat and neutralise at an approved treatment plant. Treatment should involve: Neutralisation with soda-ash or soda-lime followed by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus - Decontaminate empty containers with 5% aqueous sodium hydroxide or soda ash, followed by water.
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SECTION 14 Transport information

Labels Required

	
Marine Pollutant	
HAZCHEM	2X

Land transport (ADG)

UN number	3265				
UN proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (contains acrylic acid)				
Transport hazard class(es)	<table> <tr> <td>Class</td><td>8</td></tr> <tr> <td>Subrisk</td><td>Not Applicable</td></tr> </table>	Class	8	Subrisk	Not Applicable
Class	8				
Subrisk	Not Applicable				
Packing group	III				
Environmental hazard	Environmentally hazardous				
Special precautions for user	<table> <tr> <td>Special provisions</td><td>223 274</td></tr> <tr> <td>Limited quantity</td><td>5 L</td></tr> </table>	Special provisions	223 274	Limited quantity	5 L
Special provisions	223 274				
Limited quantity	5 L				

Air transport (ICAO-IATA / DGR)

UN number	3265						
UN proper shipping name	Corrosive liquid, acidic, organic, n.o.s. * (contains acrylic acid)						
Transport hazard class(es)	<table> <tr> <td>ICAO/IATA Class</td><td>8</td></tr> <tr> <td>ICAO / IATA Subrisk</td><td>Not Applicable</td></tr> <tr> <td>ERG Code</td><td>8L</td></tr> </table>	ICAO/IATA Class	8	ICAO / IATA Subrisk	Not Applicable	ERG Code	8L
ICAO/IATA Class	8						
ICAO / IATA Subrisk	Not Applicable						
ERG Code	8L						
Packing group	III						
Environmental hazard	Environmentally hazardous						

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Special precautions for user	Special provisions	A3 A803
	Cargo Only Packing Instructions	856
	Cargo Only Maximum Qty / Pack	60 L
	Passenger and Cargo Packing Instructions	852
	Passenger and Cargo Maximum Qty / Pack	5 L
	Passenger and Cargo Limited Quantity Packing Instructions	Y841
	Passenger and Cargo Limited Maximum Qty / Pack	1 L

Sea transport (IMDG-Code / GGVSee)

UN number	3265		
UN proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (contains acrylic acid)		
Transport hazard class(es)	IMDG Class	8	
	IMDG Subrisk	Not Applicable	
Packing group	III		
Environmental hazard	Marine Pollutant		
Special precautions for user	EMS Number	F-A , S-B	
	Special provisions	223 274	
	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

acrylic resin is found on the following regulatory lists	
Not Applicable	
triethylene glycol dimethacrylate 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	Australian Inventory of Industrial Chemicals (AIIC)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5	
acrylic acid is found on the following regulatory lists	
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals	International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
Australian Inventory of Industrial Chemicals (AIIC)	United Nations List of Prior Informed Consent Chemicals
Chemical Footprint Project - Chemicals of High Concern List	
trimethylolpropane triacrylate is found on the following regulatory lists	
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals	International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
Australian Inventory of Industrial Chemicals (AIIC)	International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B : Possibly carcinogenic to humans
polyethylene glycol dimethacrylate is found on the following regulatory lists	
Australian Inventory of Industrial Chemicals (AIIC)	
cumyl hydroperoxide is found on the following regulatory lists	
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals	
acetylphenylhydrazine is found on the following regulatory lists	
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals	Australian Inventory of Industrial Chemicals (AIIC)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6	Chemical Footprint Project - Chemicals of High Concern List
N,N-dimethyl-p-toluidine is found on the following regulatory lists	
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals	Chemical Footprint Project - Chemicals of High Concern List
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5	International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
Australian Inventory of Industrial Chemicals (AIIC)	International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B : Possibly carcinogenic to humans
4-methoxyphenol (MEHQ) 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 4
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 2	Australian Inventory of Industrial Chemicals (AIIC)

R48 High Strength Retainer #908-2745 (AUS)

National Inventory Status

National Inventory	Status
Australia - AIC	No (acrylic resin)
Australia Non-Industrial Use	No (acrylic resin; triethylene glycol dimethacrylate; 2-hydroxypropyl methacrylate; acrylic acid; trimethylolpropane triacrylate; polyethylene glycol dimethacrylate; cumyl hydroperoxide; acetylphenylhydrazine; N,N-dimethyl-p-toluidine; 4-methoxyphenol (MEHQ))
Canada - DSL	No (acrylic resin)
Canada - NDSL	No (acrylic resin; triethylene glycol dimethacrylate; 2-hydroxypropyl methacrylate; acrylic acid; trimethylolpropane triacrylate; polyethylene glycol dimethacrylate; cumyl hydroperoxide; acetylphenylhydrazine; N,N-dimethyl-p-toluidine; 4-methoxyphenol (MEHQ))
China - IECSC	No (acrylic resin)
Europe - EINEC / ELINCS / NLP	No (acrylic resin; polyethylene glycol dimethacrylate)
Japan - ENCS	No (acrylic resin)
Korea - KECI	No (acrylic resin)
New Zealand - NZIoC	No (acrylic resin)
Philippines - PICCS	No (acrylic resin)
USA - TSCA	No (acrylic resin)
Taiwan - TCSI	Yes
Mexico - INSQ	No (polyethylene glycol dimethacrylate; acetylphenylhydrazine)
Vietnam - NCI	No (acrylic resin)
Russia - ARIPS	No (acrylic resin)
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

SDS Version Summary

Version	Issue Date	Sections Updated
2.1.1.1	28/08/2020	Storage (storage requirement)

Other information

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

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

Definitions and abbreviations

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

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