

Ramset ChemSet 801 Xtrem

ITW Australia Pty Ltd (Ramsetreid)

Chemwatch Hazard Alert Code: 2

Chemwatch: 4753-62

Version No: 8.1.1.1

Safety Data Sheet according to WHS and ADG requirements

Issue Date: 14/07/2016

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Initial Date: Not Available

S.GHS.AUS.EN

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

Product Identifier

Product name	Ramset ChemSet 801 Xtrem
Synonyms	Product Code: C801C, C801J
Proper shipping name	POLYESTER RESIN KIT
Other means of identification	Not Available

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

Relevant identified uses	The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing. Before starting consider control of exposure by mechanical ventilation. Use according to manufacturer's directions.
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Details of the supplier of the safety data sheet

Registered company name	ITW Australia Pty Ltd (Ramsetreid)	ITW New Zealand Pty Ltd (Ramset)
Address	1 Ramset Drive Chirside Park VIC 3116 Australia	23-29 Poland Rd. Glenfield Auckland New Zealand
Telephone	1300 780 250	+64 9 444 3510
Fax	Not Available	Not Available
Website	www.ramsetreid.com.au	www.ramset.co.nz
Email	Not Available	Not Available

Emergency telephone number

Association / Organisation	Not Available	Not Available
Emergency telephone numbers	1800 039 008 (24hrs)	+800 2436 2255 (24hrs)
Other emergency telephone numbers	Not Available	Not Available

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture


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

CHEMWATCH HAZARD RATINGS

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

Poisons Schedule	Not Applicable
Classification [1]	Flammable Liquid Category 3, Skin Sensitizer Category 1, Acute Aquatic Hazard Category 3, Chronic Aquatic Hazard Category 3
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HSIS; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

Label elements

GHS label elements	
SIGNAL WORD	WARNING

Hazard statement(s)

H226	Flammable liquid and vapour.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

Supplementary statement(s)

Not Applicable

CLP classification (additional)

Not Applicable

Precautionary statement(s) Prevention

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233	Keep container tightly closed.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P240	Ground/bond container and receiving equipment.

Precautionary statement(s) Response

P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use alcohol resistant foam or fine spray/water fog for extinction.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.

Precautionary statement(s) Storage

P403+P235	Store in a well-ventilated place. Keep cool.
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Precautionary statement(s) Disposal

P501	Dispose of contents/container in accordance with local regulations.
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SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**Substances**

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
Not Available	1-10	1-ethenyl-3-methylbenzene [CAS 100-80-1]
Not Available	1-10	1-ethenyl-4-methylbenzene [CAS 622-97-9]
923-26-2	1-10	<u>2-hydroxypropyl methacrylate</u>
94-36-0	1-5	<u>dibenzoyl peroxide</u>
5444-75-7	1-5	<u>2-ethylhexylbenzoate</u>
	balance	Ingredients determined not to be hazardous

SECTION 4 FIRST AID MEASURES**Description of first aid measures**

Eye Contact	If this product comes in contact with eyes: Wash out immediately with water. If irritation continues, seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.
Inhalation	If fumes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary.
Ingestion	Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES**Extinguishing media**

Water spray or fog.
Foam.
Dry chemical powder.
BCF (where regulations permit).

Special hazards arising from the substrate or mixture

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

Fire Fighting	Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water course.
Fire/Explosion Hazard	Liquid and vapour are flammable. Moderate fire hazard when exposed to heat or flame. Vapour forms an explosive mixture with air. Moderate explosion hazard when exposed to heat or flame. Combustion products include: carbon dioxide (CO2) nitrogen oxides (NOx) sulfur oxides (SOx) other pyrolysis products typical of burning organic

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Minor Spills	Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment.
Major Spills	Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive. Wear breathing apparatus plus protective gloves.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	Most acrylic monomers have low viscosity therefore pouring, material transfer and processing of these materials do not necessitate heating. Viscous monomers may require heating to facilitate handling. To facilitate product transfer from original containers, product must be heated to no more than 60 deg. C. (140 F.), for not more than 24 hours. Containers, even those that have been emptied, may contain explosive vapours. Do NOT cut, drill, grind, weld or perform similar operations on or near containers. Avoid all personal contact, including inhalation. Wear protective clothing when risk of overexposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps.
Other information	Store in original containers in approved flammable liquid storage area. Store away from incompatible materials in a cool, dry, well-ventilated area. DO NOT store in pits, depressions, basements or areas where vapours may be trapped. No smoking, naked lights, heat or ignition sources.

Conditions for safe storage, including any incompatibilities

Suitable container	Packing as supplied by manufacturer. Plastic containers may only be used if approved for flammable liquid. Check that containers are clearly labelled and free from leaks. For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type. (ii) : 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) For manufactured product having a viscosity of at least 250 cSt.
Storage incompatibility	Vinyl toluene (syn: methylstyrene) polymerises explosively unless inhibited with, typically, 10-50 ppm tert-butylcatechol reacts violently with strong oxidisers, strong acids, peroxides is incompatible with aluminium chloride, ammonia, aliphatic amines, alkanolamides, caustics, metal salts uninhibited monomer may block vents and confined spaces by forming a solid polymeric material WARNING: May decompose violently or explosively on contact with other substances. This substance, or one of its components, is one of the relatively few compounds which are described as "endothermic" i.e. heat is absorbed into the compound, rather than released from it, during its formation. The majority of endothermic compounds are thermodynamically unstable and may decompose explosively under various circumstances of initiation. Many but not all endothermic compounds have been involved in decompositions, reactions and explosions and, in general, compounds with significantly positive values of standard heats of formation, may be considered suspect on stability grounds. for multifunctional acrylates: Avoid exposure to free radical initiators (peroxides, persulfates) , iron, rust, oxidisers, and strong acids and strong bases. Avoid heat, flame, sunlight, X-rays or ultra-violet radiation. Storage beyond expiration date, may initiate polymerisation. Polymerisation of large quantities may be violent (even explosive) Avoid reaction with oxidising agents

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA


Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	dibenzoyl peroxide	Benzoyl peroxide	5 mg/m3	Not Available	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
dibenzoyl peroxide	Benzoyl peroxide	15 mg/m3	1200 mg/m3	7000 mg/m3

Ingredient	Original IDLH	Revised IDLH
1-ethenyl-3-methylbenzene [CAS 100-80-1]	Not Available	Not Available
1-ethenyl-4-methylbenzene [CAS 622-97-9]	Not Available	Not Available
2-hydroxypropyl methacrylate	Not Available	Not Available
dibenzoyl peroxide	7,000 mg/m3	1,500 mg/m3
2-ethylhexylbenzoate	Not Available	Not Available

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. 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	<p>NOTE: The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. General warning: Do NOT use latex gloves! Use only recommended gloves - using the wrong gloves may increase the risk:</p> <table border="1"> <tr> <td>Exposure condition Short time use; (few minutes less than 0.5 hour) Little physical stress</td> <td>Use of thin nitrile rubber gloves: Nitrile rubber (0.1 mm) Excellent tactility ("feel"), powder-free Disposable Inexpensive Give adequate protection to low molecular weigh acrylic monomers</td> </tr> <tr> <td>Exposure condition Medium time use; less than 4 hours Physical stress (opening drums, using tools, etc.)</td> <td>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</td> </tr> <tr> <td>Exposure condition Long time Cleaning operations</td> <td>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.</td> </tr> </table> <p>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</p>	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 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 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.
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Body protection	See Other protection below						
Other protection	Overalls. PVC Apron. PVC protective suit may be required if exposure severe. Eyewash unit. Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity. For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets). Non sparking safety or conductive footwear should be considered. Conductive footwear describes a boot or shoe with a sole made from a conductive compound chemically bound to the bottom components, for permanent control to electrically ground the foot an shall dissipate static electricity from the body to reduce the possibility of ignition of volatile compounds.						
Thermal hazards	Not Available						

Respiratory protection

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

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.
Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	A-AUS P3	-	A-PAPR-AUS / Class 1 P3
up to 50 x ES	-	A-AUS / Class 1 P3	-
up to 100 x ES	-	A-2 P3	A-PAPR-2 P3 ^

^ - Full-face

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

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Off-white paste with an aromatic odour; not miscible with water		
Physical state	Free-flowing Paste	Relative density (Water = 1)	1.7

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)	>165	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	53	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Flammable.	Oxidising properties	Not Available
Upper Explosive Limit (%)	5.2	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	1.1	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	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	Stable under controlled storage conditions provided material contains adequate stabiliser / polymerisation inhibitor. Bulk storages may have special storage requirements WARNING: Gradual decomposition in strong, sealed containers may lead to a large pressure build-up and subsequent explosion. Rapid and violent polymerisation possible at temperatures above 32 deg c.
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	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. No report of respiratory illness in humans as a result of exposure to multifunctional acrylates has been found.
Ingestion	The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.
Skin Contact	The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting. All multifunctional acrylates (MFA) produce skin disorders and sensitise the skin and inflammation. Vapours generated by the heat of milling may occur in sufficient concentration to produce inflammation. Open cuts, abraded or irritated skin should not be exposed to this material
Eye	Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).
Chronic	Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Based on experience with animal studies, there is a possibility that exposure to the material may result in toxic effects to the development of the foetus, at levels which do not cause significant toxic effects to the mother. Prolonged or repeated skin contact with benzoyl peroxide may result in allergic skin reactions even at diluted concentrations. Ingestion results in abdominal pain, low body oxygen and severe depression. Chronic effects of exposure include allergic reactions characterised by redness, itching, oozing, crusting, and scaling of the skin and asthmatic wheezing. Although it does not exhibit complete carcinogenic or tumour-initiating activity, it has been associated with certain tumours of like papillomas and squamous cell carcinomas. Secondary amines may react with nitrites to form potentially carcinogenic N-nitrosamines. Sensitisation may give severe responses to very low levels of exposure, i.e. hypersensitivity. There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.

Ramset ChemSet 801 Xtrem	TOXICITY	IRRITATION
	Not Available	Not Available
2-hydroxypropyl methacrylate	TOXICITY	IRRITATION
	Oral (rat) LD50: 11,200 mg/kg ^[2]	Nil reported *
dibenzoyl peroxide	TOXICITY	IRRITATION
	dermal (mammal) LD50: >1000 mg/kg ^[2]	(@ 50%)
	Oral (rat) LD50: >950 mg/kg ^[1]	Eye (rabbit): 500 mg/24h - mild Skin effects (MAK): very weak
2-ethylhexylbenzoate	TOXICITY	IRRITATION
	Not Available	Not Available

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

Ramset ChemSet 801 Xtrem

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.

No significant acute toxicological data identified in literature search.

The chemical structure of hydroxylated diphenylalkanes or bisphenols consists of two phenolic rings joined together through a bridging carbon. This class of endocrine disruptors that mimic oestrogens is widely used in industry, particularly in plastics

Bisphenol A (BPA) and some related compounds exhibit oestrogenic activity in human breast cancer cell line MCF-7, but there were remarkable differences in activity. Several derivatives of BPA exhibited significant thyroid hormonal activity towards rat pituitary cell line GH3, which releases growth hormone in a thyroid hormone-dependent manner. However, BPA and several other derivatives did not show such activity.

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.

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

Ethyleneamines are very reactive and can cause chemical burns, skin rashes and asthma-like symptoms. It is readily absorbed through the skin and may cause eye blindness and irreparable damage. As such, they require careful handling. In general, the low-molecular weight polyamines have been positive in the Ames assay (for genetic damage); however, this is probably due to their ability to chelate copper.

For alkyl polyamines:

The alkyl polyamines cluster consists of two terminal primary and at least one secondary amine groups and are derivatives of low molecular weight ethylenediamine, propylenediamine or hexanediamine. Toxicity depends on route of exposure. Cluster members have been shown to cause skin irritation or sensitisation, eye irritation and genetic defects, but have not been shown to cause cancer.

Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergic 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.

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

Triethylenetetramine is a severe irritant to skin and eyes and may induce skin sensitisation. Acute exposure to saturated vapour via inhalation was tolerated without impairment but exposure to aerosol may lead to reversible irritations of the mucous membranes in the airways. Studies done on experimental animals showed that it does not cause cancer or foetal developmental defects.

2-HYDROXYPROPYL METHACRYLATE

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Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergic 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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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

DIBENZOYL PEROXIDE

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 material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

Benzoyl peroxide may cause double vision, breathing problems, excess saliva and tear formation, redness of the skin and changes in motor activity. It did not produce blood or biochemical adverse effects, gene mutation or evidence of cancer. Repeated oral administration may result in decreased weights of testes and the newborn.

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.

2-ETHYLHEXYLBENZOATE

No significant acute toxicological data identified in literature search.

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

Legend: – Data available but does not fill the criteria for classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
2-hydroxypropyl methacrylate	LC50	96	Fish	157.065mg/L	3
2-hydroxypropyl methacrylate	EC50	48	Crustacea	>143mg/L	2
2-hydroxypropyl methacrylate	NOEC	504	Crustacea	45.2mg/L	2
2-hydroxypropyl methacrylate	EC50	Not Applicable	Algae or other aquatic plants	110mg/L	2
2-hydroxypropyl methacrylate	EC50	72	Algae or other aquatic plants	>97.2mg/L	2
dibenzoyl peroxide	LC50	96	Fish	0.0602mg/L	2
dibenzoyl peroxide	EC50	48	Crustacea	0.11mg/L	2
dibenzoyl peroxide	EC50	72	Algae or other aquatic plants	0.0422mg/L	2
dibenzoyl peroxide	EC50	72	Algae or other aquatic plants	0.0613mg/L	2
dibenzoyl peroxide	NOEC	72	Algae or other aquatic plants	0.02mg/L	2
2-ethylhexylbenzoate	EC50	96	Algae or other aquatic plants	0.062mg/L	3
2-ethylhexylbenzoate	LC50	96	Fish	>0.66mg/L	2
2-ethylhexylbenzoate	EC50	48	Crustacea	>0.125mg/L	2
2-ethylhexylbenzoate	EC50	96	Algae or other aquatic plants	>0.035mg/L	2
2-ethylhexylbenzoate	NOEC	96	Algae or other aquatic plants	>=0.035mg/L	2
Legend:	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - 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				

Harmful 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 styrene:

Transport: Styrene is expected to volatilise from surface waters, and is also removed from waters by adsorption onto soils and sediments. Under certain conditions, styrene may leach through soil (particularly sandy soils) and enter ground water.

Transformation/Persistence: Air - In the atmosphere, styrene reacts with both hydroxyl radicals and ozone with estimated half-lives of 3.5 and 9 hours, respectively. The chemical is also degraded in the presence of NOX and natural sunlight.

Substances containing unsaturated carbons are ubiquitous in indoor environments. They result from many sources (see below). Most are reactive with environmental ozone and many produce stable products which are thought to adversely affect human health. The potential for surfaces in an enclosed space to facilitate reactions should be considered.

Source of unsaturated substances	Unsaturated substances (Reactive Emissions)	Major Stable Products produced following reaction with ozone.
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For Acrylates

Ecotoxicity - Compounds with a log Pow >5 cause drowsiness or stupor, but at lower log Pow the toxicity of acrylates is greater than predicted for simple narcotics.

Atmospheric Fate: Volatilized acrylic acid and acrylic esters are predicted to degrade rapidly by atmospheric photo-oxidation with estimated half-lives of 2 to 24 h.

Terrestrial Fate: Acrylic acid biodegrades aerobically in soil. The mobility in soil of acrylic acid and its esters ranged from 'medium' to 'very high'.

For alkyl polyamines:

All members of this cluster are miscible or soluble in water.

Environmental Fate: Members of this cluster are expected to have varying degrees of mobility in the soil. While models suggest that they are likely to react rapidly with photochemically produced hydroxyl radicals (with half-lives of an hour), as they do not readily exist in vapour form this is not expected to be a predominant removal pathway for these chemicals. Experimental data and results from estimation models indicate that all members of this cluster have the potential to biodegrade aerobically under environmental conditions.

DO NOT discharge into sewer or waterways.

Persistence and degradability

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

Bioaccumulative potential

Ingredient	Bioaccumulation
2-hydroxypropyl methacrylate	LOW (BCF = 3.2)
dibenzoyl peroxide	LOW (LogKOW = 3.46)
2-ethylhexylbenzoate	HIGH (LogKOW = 5.1924)

Mobility in soil

Ingredient	Mobility
2-hydroxypropyl methacrylate	LOW (KOC = 10)
dibenzoyl peroxide	LOW (KOC = 771)
2-ethylhexylbenzoate	LOW (KOC = 5178)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	<p>Containers may still present a chemical hazard/ danger when empty. Return to supplier for reuse/ recycling if possible.</p> <p>Otherwise:</p> <p>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.</p> <p>Where possible retain label warnings and SDS and observe all notices pertaining to the product.</p> <p>DO NOT allow wash water from cleaning or process equipment to enter drains.</p> <p>It may be necessary to collect all wash water for treatment before disposal.</p> <p>In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</p> <p>Where in doubt contact the responsible authority.</p> <p>Recycle wherever possible.</p> <p>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.</p> <p>Dispose of by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus (after admixture with suitable combustible material).</p> <p>Decontaminate empty containers.</p>
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SECTION 14 TRANSPORT INFORMATION

Labels Required

	
Marine Pollutant	NO
HAZCHEM	•2YE

Land transport (ADG)

UN number	3269				
UN proper shipping name	POLYESTER RESIN KIT				
Transport hazard class(es)	<table border="0"> <tr> <td>Class</td> <td>3</td> </tr> <tr> <td>Subrisk</td> <td>Not Applicable</td> </tr> </table>	Class	3	Subrisk	Not Applicable
Class	3				
Subrisk	Not Applicable				
Packing group	III				
Environmental hazard	Not Applicable				
Special precautions for user	<table border="0"> <tr> <td>Special provisions</td> <td>236</td> </tr> <tr> <td>Limited quantity</td> <td>5 L</td> </tr> </table>	Special provisions	236	Limited quantity	5 L
Special provisions	236				
Limited quantity	5 L				

Air transport (ICAO-IATA / DGR)

UN number	3269														
UN proper shipping name	Polyester resin kit														
Transport hazard class(es)	<table border="0"> <tr> <td>ICAO/IATA Class</td> <td>3</td> </tr> <tr> <td>ICAO / IATA Subrisk</td> <td>Not Applicable</td> </tr> <tr> <td>ERG Code</td> <td>3L</td> </tr> </table>	ICAO/IATA Class	3	ICAO / IATA Subrisk	Not Applicable	ERG Code	3L								
ICAO/IATA Class	3														
ICAO / IATA Subrisk	Not Applicable														
ERG Code	3L														
Packing group	III														
Environmental hazard	Not Applicable														
Special precautions for user	<table border="0"> <tr> <td>Special provisions</td> <td>A66A163</td> </tr> <tr> <td>Cargo Only Packing Instructions</td> <td>370</td> </tr> <tr> <td>Cargo Only Maximum Qty / Pack</td> <td>5 kg</td> </tr> <tr> <td>Passenger and Cargo Packing Instructions</td> <td>370</td> </tr> <tr> <td>Passenger and Cargo Maximum Qty / Pack</td> <td>5 kg</td> </tr> <tr> <td>Passenger and Cargo Limited Quantity Packing Instructions</td> <td>Y370</td> </tr> <tr> <td>Passenger and Cargo Limited Maximum Qty / Pack</td> <td>1 kg</td> </tr> </table>	Special provisions	A66A163	Cargo Only Packing Instructions	370	Cargo Only Maximum Qty / Pack	5 kg	Passenger and Cargo Packing Instructions	370	Passenger and Cargo Maximum Qty / Pack	5 kg	Passenger and Cargo Limited Quantity Packing Instructions	Y370	Passenger and Cargo Limited Maximum Qty / Pack	1 kg
Special provisions	A66A163														
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Passenger and Cargo Maximum Qty / Pack	5 kg														
Passenger and Cargo Limited Quantity Packing Instructions	Y370														
Passenger and Cargo Limited Maximum Qty / Pack	1 kg														

Sea transport (IMDG-Code / GGVSee)

UN number	3269						
UN proper shipping name	POLYESTER RESIN KIT						
Transport hazard class(es)	<table border="0"> <tr> <td>IMDG Class</td> <td>3</td> </tr> <tr> <td>IMDG Subrisk</td> <td>Not Applicable</td> </tr> </table>	IMDG Class	3	IMDG Subrisk	Not Applicable		
IMDG Class	3						
IMDG Subrisk	Not Applicable						
Packing group	III						
Environmental hazard	Not Applicable						
Special precautions for user	<table border="0"> <tr> <td>EMS Number</td> <td>F-E, S-D</td> </tr> <tr> <td>Special provisions</td> <td>236 340</td> </tr> <tr> <td>Limited Quantities</td> <td>5 L</td> </tr> </table>	EMS Number	F-E, S-D	Special provisions	236 340	Limited Quantities	5 L
EMS Number	F-E, S-D						
Special provisions	236 340						
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

2-HYDROXYPROPYL METHACRYLATE(923-26-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

DIBENZOYL PEROXIDE(94-36-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

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

Australia Hazardous Substances Information System - Consolidated Lists

International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft

Australia Inventory of Chemical Substances (AICS)

2-ETHYLHEXYLBENZOATE(5444-75-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Not Applicable

National Inventory	Status
Australia - AICS	N (2-ethylhexylbenzoate)
Canada - DSL	Y
Canada - NDSL	N (dibenzoyl peroxide; 2-hydroxypropyl methacrylate; 2-ethylhexylbenzoate)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	Y
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	N (2-ethylhexylbenzoate)
USA - TSCA	Y
Legend:	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION

Other information

Ingredients with multiple cas numbers

Name	CAS No
2-hydroxypropyl methacrylate	122413-04-1, 124742-02-5, 138258-23-8, 191411-56-0, 204013-27-4, 27072-46-4, 27813-02-1, 30348-68-6, 32073-20-4, 50851-93-9, 50975-16-1, 51424-40-9, 51480-40-1, 63625-57-0, 923-26-2, 99609-88-8

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.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net

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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