Septone Fibreglass MEKP

ITW Polymers & Fluids

Chemwatch Hazard Alert Code: 3

Chemwatch: **7753373**
Version No: **8.1**
Safety Data Sheet according to Work Health and Safety Regulations (Hazardous Chemicals) 2023 and ADG requirements

Issue Date: **23/12/2022**
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SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier

Product name	Septone Fibreglass MEKP
Chemical Name	Not Applicable
Synonyms	METHYL ETHYL KETONE PEROXIDE; Product Code: ABFR, MMEKP20
Proper shipping name	ORGANIC PEROXIDE TYPE D, LIQUID
Chemical formula	Not Applicable
Other means of identification	Not Available

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

Relevant identified uses	Initiator for curing polyester resins. MEKP is also sold as one part of a multi part kit. The complete kit is known as 'SEPTONE FIBREGLASS REPAIR KIT'. Septone Code Number ABFR.

Details of the manufacturer or supplier of the safety data sheet

Registered company name	**ITW Polymers & Fluids**	**ITW Polymers & Fluids NZ**
Address	100 Hassall New South Wales 2164 Australia	Unit 2/38 Trugood Drive 2013 New Zealand
Telephone	+61 2 9757 8800	+64 9272 1940
Fax	Not Available	Not Available
Website	Not Available	Not Available
Email	orders@itwpf.com.au	info@aamtech.co.nz

Emergency telephone number

Association / Organisation	**Chemwatch**	**CHEMWATCH EMERGENCY RESPONSE (24/7)**
Emergency telephone number(s)	**1800 951 288**	**+61 1800 951 288**
Other emergency telephone number(s)	**+61 2 9186 1132**	**+61 3 9573 3188**

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.

COMBUSTIBLE LIQUID, regulated for storage purposes only

Poisons Schedule	S5
Classification [1]	Flammable Liquids Category 4, Organic Peroxides Type D, Acute Toxicity (Oral) Category 4, Acute Toxicity (Dermal) Category 4, Skin Corrosion/Irritation Category 1B, Serious Eye Damage/Eye Irritation Category 1, Acute Toxicity (Inhalation) Category 4, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3, Germ Cell Mutagenicity 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

Hazard pictogram(s)	

Signal word	**Danger**

Hazard statement(s)

H227	Combustible liquid.
H242	Heating may cause a fire.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
AUH066	Repeated exposure may cause skin dryness and cracking.

Precautionary statement(s) General

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P234	Keep only in original packaging.
P235	Keep cool.

Precautionary statement(s) Response

P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If more than 15 mins from Doctor, INDUCE VOMITING (if conscious).
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or 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.
P411	Store at temperatures not exceeding ...°C/...°F.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P410	Protect from sunlight.

Precautionary statement(s) Disposal

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

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
1338-23-4	30-60	methyl ethyl ketone peroxide
6846-50-0	30-60	2,2,4-trimethyl-1,3-pentanediol diisobutyrate
78-93-3	0-10	methyl ethyl ketone
7722-84-1	0-10	hydrogen peroxide

CAS No	%[weight]	Name
107-41-5	0-10	hexylene glycol

Legend:	***1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L; * EU IOELVs available***

SECTION 4 First aid measures

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: ▸ Wash out immediately with fresh running water. ▸ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▸ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: ▸ Immediately remove all contaminated clothing, including footwear. ▸ Flush skin and hair with running water (and soap if available). ▸ Seek medical attention in event of irritation.
Inhalation	▸ If fumes or combustion products are inhaled remove from contaminated area. ▸ Lay patient down. Keep warm and rested. ▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. ▸ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ▸ Transport to hospital, or doctor, without delay.
Ingestion	▸ If swallowed do **NOT** induce vomiting. ▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▸ Observe the patient carefully. ▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ▸ Seek medical advice.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Firefighting measures

Extinguishing media

FOR SMALL FIRE:
- Water spray, foam, CO2 or dry chemical.
- **DO NOT** use water jets.

FOR LARGE FIRE:
- Flood fire area with water from a distance.

Special hazards arising from the substrate or mixture

Fire Incompatibility	▸ Avoid storage with reducing agents. ▸ Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous

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 in the event of a fire. ▸ Prevent, by any means available, spillage from entering drains or water courses.
Fire/Explosion Hazard	**WARNING:** In use may form flammable/ explosive vapour-air mixtures. ▸ Will not burn but increases intensity of fire. ▸ May explode from friction, shock, heat or containment. ▸ Heating may cause expansion or decomposition leading to violent rupture of containers. ▸ Heat affected containers remain hazardous. Combustion products include: carbon dioxide (CO2) other pyrolysis products typical of burning organic material. ▸ Organic peroxides provide internal oxygen for combustion, so burn intensely. ▸ Simple smothering actions are not effective against established fires. NOTE: A Type D Organic Peroxide: ▸ may partially detonate ▸ does not deflagrate rapidly and ▸ shows no violent effect when heated under confinement

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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	Slippery when spilt. ▸ Clean up all spills immediately. ▸ No smoking, naked lights, ignition sources. ▸ Avoid all contact with any organic matter including fuel, solvents, sawdust, paper or cloth and other incompatible materials, as ignition may result. ▸ Avoid breathing dust or vapours and all contact with skin and eyes.
Major Spills	Slippery when spilt. ▸ 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 full body protective clothing with breathing apparatus.

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 USE** brass or copper containers / stirrers ▸ **DO NOT** allow clothing wet with material to stay in contact with skin ▸ Mix only as much as is required ▸ **DO NOT** return the mixed material to original containers For oxidisers, including peroxides. · Avoid personal contact and inhalation of dust, mist or vapours. · Provide adequate ventilation. · Always wear protective equipment and wash off any spillage from clothing.
Other information	Maximum storage temperature 35 degC. ▸ Store in original containers in an isolated approved flammable materials storage area. ▸ Keep containers securely sealed as supplied. ▸ **WARNING:** Gradual decomposition during storage in sealed containers may lead to a large pressure build-up and subsequent explosion. ▸ No smoking, naked lights, heat or ignition sources. **FOR MINOR QUANTITIES**: Ensure that: ▸ packages are not opened in storage area, ▸ the goods are kept at least 3 metres from sources of heat as well as all other dangerous goods and all other materials which might react with this material might react to cause a fire, a chemical reaction or explosion, ▸ materials for absorbing and neutralising spills are kept near the storage; ▸ procedures are displayed at the storage describing actions to be taken in the event of a spill or fire. ▸ adequate numbers and types of portable fire extinguisher are provided in or near the storage area. **FOR PACKAGE STORAGE**: ▸ If the material is stored in an indoor fireproof cabinet, the cabinet must be vented to outside the building containing the cabinet. ▸ Packages must be protected from exposure to weather unless the packages are: (i) sole packages of more than 20 l capacity (ii) of metallic or plastic construction (iii) securely closed and are not to be opened in the storage area (iv) stored in such a manner that rain water, contaminated with the material, is collected and disposed of safely.

Conditions for safe storage, including any incompatibilities

Suitable container	Store in original containers.
Storage incompatibility	▸ Organic peroxides as a class are highly reactive. ▸ They are thermally unstable and prone to undergoing exothermic self-accelerating decomposition. ▸ Organic peroxides may decompose explosively, burn rapidly, be impact and/or friction sensitive and react dangerously with many other substances. ▸ Amines and polyester accelerators (cobalt salts, for example) if mixed with organic peroxides / organic peroxide mixtures will cause rapid / spontaneous decomposition with fire / explosion hazard. ▸ Avoid any contamination. ▸ Avoid finely divided combustible materials ▸ Avoid all external heat. ▸ Avoid mixing or reaction with acids, alkalies, reducing agents, metal powders, metal oxides, transition metals and their compounds.

	▸ Incidents involving interaction of active oxidants and reducing agents, either by design or accident, are usually very energetic and examples of so-called redox reactions. ▸ Peroxides decompose over time and give off oxygen. ▸ Peroxides require controlled storage for stability. ▸ **DANGER**: Explosion hazard, never mix peroxides with accelerators or promoters. ▸ As a class, organic peroxides are amongst the most hazardous materials commonly used in the workplace or laboratory. Several are highly flammable and extremely sensitive to shock, heat, spark, friction, impact and light and readily react with strong oxidising and reducing agents. ▸ Organic compounds, especially finely divided materials, can ignite on contact with concentrated peroxides. ▸ Strongly reduced material such as sulfides, nitrides, and hydrides may react explosively with peroxides. ▸ Avoid storage with reducing 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	methyl ethyl ketone peroxide	Methyl ethyl ketone peroxide	Not Available	Not Available	0.2 ppm / 1.5 mg/m3	Not Available
Australia Exposure Standards	methyl ethyl ketone	Methyl ethyl ketone (MEK)	150 ppm / 445 mg/m3	890 mg/m3 / 300 ppm	Not Available	Not Available
Australia Exposure Standards	hydrogen peroxide	Hydrogen peroxide	1 ppm / 1.4 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	hexylene glycol	Hexylene glycol	Not Available	Not Available	25 ppm / 121 mg/m3	Not Available

Ingredient	Original IDLH	Revised IDLH
methyl ethyl ketone peroxide	Not Available	Not Available
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	Not Available	Not Available
methyl ethyl ketone	3,000 ppm	Not Available
hydrogen peroxide	75 ppm	Not Available
hexylene glycol	Not Available	Not Available

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	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.***	

Exposure controls

Appropriate engineering controls	Use in a well-ventilated area General exhaust is adequate under normal operating conditions.
Individual protection measures, such as personal protective equipment	
Eye and face protection	▸ Chemical goggles. ▸ Full face shield may be required for supplementary but never for primary protection of eyes. ▸ 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	▸ Wear chemical protective gloves, e.g. PVC. ▸ Wear safety footwear or safety gumboots, e.g. Rubber 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. ▸ **DO NOT** wear cotton or cotton-backed gloves. ▸ **DO NOT** wear leather gloves.

	‣ Promptly hose all spills off leather shoes or boots or ensure that such footwear is protected with PVC over-shoes.
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.

Respiratory protection

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

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

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Clear colourless mobile liquid with a mildly pungent odour; does not mix with water. Self accelerating decomposition temperature (SADT) approximately 60°C.

Physical state	Liquid	**Relative density (Water = 1)**	1.16
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Available
pH (as supplied)	Not Applicable	**Decomposition temperature (°C)**	~60
Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	Not Available
Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Applicable
Flash point (°C)	71 (Setaflash)	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Combustible.	**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)	Negligible	**Gas group**	Not Available
Solubility in water	Immiscible	**pH as a solution (1%)**	Not Applicable
Vapour density (Air = 1)	Not Available	**VOC g/L**	Not Available
Heat of Combustion (kJ/g)	Not Available	**Ignition Distance (cm)**	Not Available
Flame Height (cm)	Not Available	**Flame Duration (s)**	Not Available
Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	**Enclosed Space Ignition Deflagration Density (g/m3)**	Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	‣ Unstable in the presence of incompatible materials. ‣ Product is considered stable under normal handling conditions. ‣ Prolonged exposure to heat. ‣ Hazardous polymerisation will not occur. NOTE: ‣ A range of exothermic decomposition energies for peroxides is given as 200-340 kJ/mol.

	‣ The relationship between energy of decomposition and processing hazards has been the subject of discussion; it is suggested that values of energy releases per unit of mass, rather than on a molar mass basis (J/g) be used in the assessment. For example, in open vessel processes (with man-hole size openings, in an industrial setting), substances with exothermic decomposition energies below 500 J/g are unlikely to present a danger, whilst those in closed vessel processes (opening is a safety valve or bursting disk) present some danger where the decomposition energy exceeds 150 J/g. BRETHERICK: Handbook of Reactive Chemical Hazards, 4th Edition
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 may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo. Animal testing showed that exposure to methyl ethyl ketone peroxide (MEKP) vapour caused lung congestion with purple spots. 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 organic peroxides may produce nausea, vomiting, abnormal pain, stupor, bluish discoloration of skin and mucous membranes. Inflammation of the heart muscle may also occur. Individuals surviving ingestion of up to 60 grams of 60% methyl ethyl ketone peroxide (MEKP) solution experienced severe inflammation of the oesophagus and stomach. Chemical burns of the gastrointestinal tract and scarring and narrowing of the oesophagus were reported in the case of a patient who survived swallowing 60 grams of a 2% solution.
Skin Contact	The material can produce chemical burns following direct contact with the skin. Skin contact with the material may be harmful; systemic effects may result following absorption.
Eye	The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating.
Chronic	Repeated or prolonged exposure to corrosives 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. Methyl ethyl ketone peroxide (MEKP) exhibits tumour promoting properties when applied topically to the skin of hairless mutant mice that had previously been initiated with ultraviolet light. Mice given total doses of approximately 7 mg MEKP developed malignant tumours after 15 months. Chronic exposure by rats repeatedly dosed with MEKP 3 times/weekly for 7 weeks by the intraperitoneal or oral route (13 mg/kg and 97 mg/kg respectively) produced marked evidence of cumulative toxicity. The liver showed occasional damage, consisting of fatty degeneration in the central portion of the lobule and an increased number of round cells in the portal spaces; the proximal tubules of the kidney showed desquamation of the epithelium whilst the convoluted tubules showed granular precipitates or castes in the lumina.

Septone Fibreglass MEKP	**TOXICITY**	**IRRITATION**
	Not Available	Not Available
methyl ethyl ketone peroxide	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: 4000 mg/kg[1]	Eye (Rodent - rabbit): 3mg
	Inhalation (Mouse) LC50: 2.5 mg/L4h[2]	Eye (Rodent - rabbit): 40%
	Oral (Mouse) LD50; 250 mg/kg[2]	Skin (Rodent - rabbit): 500mg
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: >2000 mg/kg[1]	Eye: no adverse effect observed (not irritating)[1]
	Oral (Rat) LD50: >2000 mg/kg[1]	Skin (Human): 1%/3W (intermittent) - Mild
		Skin (Rodent - guinea pig): 5gm - Mild
		Skin: no adverse effect observed (not irritating)[1]
methyl ethyl ketone	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: 6480 mg/kg[2]	Eye (Human): 350ppm
	Inhalation (Mouse) LC50: 32 mg/L4h[2]	Eye (Rodent - rabbit): 80mg
	Oral (Rat) LD50: 2054 mg/kg[1]	Eye: adverse effect observed (irritating)[1]
		Skin (Rodent - rabbit): 14mg/24H - Mild
		Skin (Rodent - rabbit): 402mg/24H - Mild
		Skin (Rodent - rabbit): 500mg/24H - Moderate

		Skin: no adverse effect observed (not irritating)[1]
hydrogen peroxide	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: >2000 mg/kg[1]	Eye (Rodent - rabbit): 1mg - Severe
	Inhalation (Mouse) LC50: 2800 mg/L4h[2]	Eye (Rodent - rat): 7.5%
	Oral (Rat) LD50: >225 mg/kg[2]	Skin (Rodent - mouse): 30%
		Skin (Rodent - rat): 15%
hexylene glycol	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: 8560 mg/kg[2]	Eye: adverse effect observed (irritating)[1]
	Oral (Rat) LD50: 3700 mg/kg[2]	Skin (Rodent - rabbit): 465mg - Mild
		Skin (Rodent - rabbit): 465mg/24H - Moderate
		Skin (Rodent - rabbit): 500mg/24H - Moderate
		Skin: no adverse effect observed (not irritating)[1]

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***

METHYL ETHYL KETONE PEROXIDE	structure/ function of the oesophagus, nausea, vomiting, gastrointestinal change, lymphoma recorded. Equivocal tumourigen by RTECS criteria.
2,2,4-TRIMETHYL-1,3-PENTANEDIOL DIISOBUTYRATE	NOAEL oral (rat), 103 days = 1% in diet *** NOEL oral (dog), 90 days = 1% in diet *** Mutagenicity/Genotoxicity Data: *** Chromosomal aberration assay: Negative (+/- activation) CHO/HGPRT assay: Negative (+/- activation) Salmonella-E.coli reverse mutation assay (Ames test): Negative (+/- activation) *,**,*** Various suppliers MSDS Sensitization Species:Guinea pig: Result: sensitizing Effects on foetal development: Species: Rabbit Application Route: Oral Developmental Toxicity: NOAEL: 300 mg/kg body weight Reproductive toxicity;Assessment: Some evidence of adverse effects on development, based on animal experiments. * Eastman Benzoflex 6000 Plasticiser For 2,2,4-trimethyl-1,3-pentanediol diisobutyrate (TXIB) Laboratory testing showed that TXIB does not cause genetic toxicity. It may damage the kidneys of developing animals but only at levels that also affect the adult.
METHYL ETHYL KETONE	Methyl ethyl ketone is considered to have a low order of toxicity; however, methyl ethyl ketone is often used in combination with other solvents and the mixture may have greater toxicity than either solvent alone. Combinations of n-hexane with methyl ethyl ketone, and also methyl n-butyl ketone with methyl ethyl ketone may result in an increased in peripheral neuropathy, a progressive disorder of the nerves of the extremities. Combinations with chloroform also show an increase in toxicity.
HYDROGEN PEROXIDE	No significant acute toxicological data identified in literature search. Exposure to hydrogen peroxide via the skin or oral route can produce toxic effects. Animal studies have shown evidence of damage to the kidney, gut, thymus and liver. Stomach and intestinal lesions including benign and malignant cancers have been observed in mice. It may produce genetic and developmental defects but no reproductive toxicity was reported in mice. 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.
HEXYLENE GLYCOL	Hexylene glycol is of low acute toxicity but may be acutely lethal at very high doses. It may cause reversible irritation of the skin and eye. Repeated exposure may cause irreversible damage to the liver and stomach and partly reversible kidney damage. It is likely not to cause mutations or affect reproduction or development of the unborn.
METHYL ETHYL KETONE PEROXIDE & 2,2,4-TRIMETHYL-1,3-PENTANEDIOL DIISOBUTYRATE	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.
2,2,4-TRIMETHYL-1,3-PENTANEDIOL DIISOBUTYRATE & METHYL ETHYL KETONE	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.
METHYL ETHYL KETONE & HYDROGEN PEROXIDE	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia.

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

Septone Fibreglass MEKP

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

methyl ethyl ketone peroxide

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	3.2mg/l	2
EC50	48h	Crustacea	39mg/l	2
LC50	96h	Fish	44.2mg/l	2
EC10(ECx)	72h	Algae or other aquatic plants	1.7mg/l	2

2,2,4-trimethyl-1,3-pentanediol diisobutyrate

Endpoint	Test Duration (hr)	Species	Value	Source
BCF	1008h	Fish	0.6-0.8	7
EC50	72h	Algae or other aquatic plants	>7.49mg/l	2
EC50	48h	Crustacea	>1.46mg/l	1
LC50	96h	Fish	>1.55mg/l	2
NOEC(ECx)	504h	Crustacea	0.7mg/l	2

methyl ethyl ketone

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	1220mg/l	2
EC50	48h	Crustacea	308mg/l	2
LC50	96h	Fish	>324mg/L	4
EC50	96h	Algae or other aquatic plants	>500mg/L	4
NOEC(ECx)	48h	Crustacea	68mg/l	2

hydrogen peroxide

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	0.69mg/l	4
EC50	48h	Crustacea	2mg/l	2
LC50	96h	Fish	16.4mg/l	2
EC50	96h	Algae or other aquatic plants	2.27mg/l	4
NOEC(ECx)	72h	Algae or other aquatic plants	0.1mg/l	1

hexylene glycol

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	72h	Algae or other aquatic plants	>429mg/l	2
NOEC(ECx)	72h	Algae or other aquatic plants	429mg/l	2
EC50	48h	Crustacea	2400-3200mg/L	4
LC50	96h	Fish	>100mg/l	4

Legend: ***Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 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***

MEKP is considered to be readily biodegradable, and it is slightly toxic to marine aquatic organisms.
DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
methyl ethyl ketone peroxide	LOW (Half-life = 56 days)	LOW (Half-life = 0.38 days)
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	HIGH	HIGH
methyl ethyl ketone	LOW (Half-life = 14 days)	LOW (Half-life = 26.75 days)
hydrogen peroxide	LOW	LOW

Ingredient	Persistence: Water/Soil	Persistence: Air
hexylene glycol	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
methyl ethyl ketone peroxide	LOW (LogKOW = -0.5762)
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	LOW (BCF = 1)
methyl ethyl ketone	LOW (LogKOW = 0.29)
hydrogen peroxide	LOW (LogKOW = -1.571)
hexylene glycol	LOW (LogKOW = 0.5802)

Mobility in soil

Ingredient	Mobility
methyl ethyl ketone peroxide	LOW (Log KOC = 10.58)
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	LOW (Log KOC = 607.5)
methyl ethyl ketone	MEDIUM (Log KOC = 3.827)
hydrogen peroxide	LOW (Log KOC = 14.3)
hexylene glycol	HIGH (Log KOC = 1)

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal	For small quantities of oxidising agent: ‣ Cautiously acidify a 3% solution to pH 2 with sulfuric acid. ‣ Gradually add a 50% excess of sodium bisulfite solution with stirring. ‣ Add a further 10% sodium bisulfite. ‣ If no further reaction occurs (as indicated by a rise in temperature) cautiously add more acid.

SECTION 14 Transport information

Labels Required

	
Marine Pollutant	NO
HAZCHEM	2WE

Land transport (ADG)

14.1. **UN number or ID number**	3105
14.2. **UN proper shipping name**	ORGANIC PEROXIDE TYPE D, LIQUID
14.3. **Transport hazard class(es)**	Class: 5.2 Subsidiary Hazard: Not Applicable
14.4. **Packing group**	Not Applicable
14.5. **Environmental hazard**	Not Applicable
14.6. **Special precautions for user**	Special provisions: 122 274 Limited quantity: 125 ml

Air transport (ICAO-IATA / DGR)

14.1. **UN number**	3105
	Organic peroxide type D, liquid *

14.2. **UN proper shipping name**	
14.3. **Transport hazard class(es)**	ICAO/IATA Class: 5.2 ICAO / IATA Subsidiary Hazard: Not Applicable ERG Code: 5L
14.4. **Packing group**	Not Applicable
14.5. **Environmental hazard**	Not Applicable
14.6. **Special precautions for user**	Special provisions: A20 A150 A802 Cargo Only Packing Instructions: 570 Cargo Only Maximum Qty / Pack: 10 L Passenger and Cargo Packing Instructions: 570 Passenger and Cargo Maximum Qty / Pack: 5 L Passenger and Cargo Limited Quantity Packing Instructions: Forbidden Passenger and Cargo Limited Maximum Qty / Pack: Forbidden

Sea transport (IMDG-Code / GGVSee)

14.1. **UN number**	3105
14.2. **UN proper shipping name**	ORGANIC PEROXIDE TYPE D, LIQUID
14.3. **Transport hazard class(es)**	IMDG Class: 5.2 IMDG Subsidiary Hazard: Not Applicable
14.4. **Packing group**	Not Applicable
14.5 **Environmental hazard**	Not Applicable
14.6. **Special precautions for user**	EMS Number: F-J , S-R Special provisions: 122 274 Limited Quantities: 125 mL

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

Not Applicable

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

Product name	Group
methyl ethyl ketone peroxide	Not Available
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	Not Available
methyl ethyl ketone	Not Available
hydrogen peroxide	Not Available
hexylene glycol	Not Available

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
methyl ethyl ketone peroxide	Not Available
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	Not Available
methyl ethyl ketone	Not Available
hydrogen peroxide	Not Available
hexylene glycol	Not Available

SECTION 15 Regulatory information

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

methyl ethyl ketone peroxide is found on the following regulatory lists

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

2,2,4-trimethyl-1,3-pentanediol diisobutyrate is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

methyl ethyl ketone is found on the following regulatory lists

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

hydrogen peroxide is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6
Australian Inventory of Industrial Chemicals (AIIC)
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

hexylene glycol is found on the following regulatory lists

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

Additional Regulatory Information

Not Applicable

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (methyl ethyl ketone peroxide; 2,2,4-trimethyl-1,3-pentanediol diisobutyrate; methyl ethyl ketone; hydrogen peroxide; hexylene glycol)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	All chemical substances in this product have been designated as TSCA Inventory ‘Active'
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - FBEPH	Yes
Legend:	***Yes = All CAS declared ingredients are on the inventory*** ***No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.***

SECTION 16 Other information

Revision Date	23/12/2022
Initial Date	10/10/2011

SDS Version Summary

Version	Date of Update	Sections Updated
7.1	01/11/2019	One-off system update. NOTE: This may or may not change the GHS classification
8.1	23/12/2022	Classification review due to GHS Revision change.

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.