1. IDENTIFICATION OF THE MATERIAL AND THE MANUFACTURER

Product Name	**MAC SILIGLIDE FOOD GRADE SILICONE FLUID** Premium Food Grade Silicone Lubricant All formats:		
Statement of Hazard Nature	Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances, New Organisms legislation. Classified as a Dangerous Good for transport purposes.		
Supplier Name	Arandee Ltd		
Address	108 Rockfield Road, Penrose, Auckland 1061, New Zealand		
Telephone	+64 (9) 579 5139		
Emergency	National Poisons Centre -24 hours	Australia	13 11 26
		New Zealand	0800 POISON 0800 764 766
E-mail	sales@arandee.co.nz		
Web Site	http://www.arandee.co.nz		
Synonym(s)			
Use(s)	Premium food grade lubricant used to repel water, eliminate squeaks and reduce friction on all moving parts. Dry, odourless and colourless food grade silicone stable at wide range of temperatures.		
Approval(s)			

2. HAZARDS IDENTIFICATION

Hazard Pictogram(s)

Signal Word **Danger**

HAZARD STATEMENT	**H225**	Highly flammable liquid and vapour
	H319	Causes serious eye irritation
	H335	May cause respiratory irritation
	H371	May cause damage to organs
	H373	May cause damage to organs through prolonged or repeated exposure
	H411	Toxic to aquatic life

	H443	Hazardous to terrestrial invertebrates
	H304	May be fatal if swallowed and enters airways
	H336	May cause drowsiness or dizziness
PRECAUTIONARY STATEMENT(S) PREVENTION	**P210**	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
	P260	Do not breathe mist/vapours/spray
	P271	Use only outdoors or in a well-ventilated area
	P240	Ground and bond container and receiving equipment
PRECAUTIONARY STATEMENT(S) RESPONSE	**P301+P310**	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider
	P331	Do NOT induce vomiting
	P370+P378	In case of fire: Use alcohol resistant foam or normal protein foam to extinguish
	P305+P351 +P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
PRECAUTIONARY STATEMENT(S) STORAGE	**P403+P235**	Store in a well-ventilated place. Keep cool
	P405	Store locked up
PRECAUTIONARY STATEMENT(S) DISPOSAL	**P501**	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation

3. HAZARDS IDENTIFICATION COMPOSITION OF INGREDIENTS

Ingredient	Concentration	CAS Number
2-METHLPENTANE	}85-95	107-83-5
NAPTHA PETROLEUM, LIGHT, HYDROTREATED	}	64742-49-0
N-HEXANE	6.8	110-54-3
POLYDIMETHYLSILOXANE	2-5	63148-62-9

4. 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 the 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 airways and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of 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.
- Avoid giving milk.
- Avoid giving alcohol.

Indication of any immediate medical attention and special treatment needed

Any material aspirated during vomiting may produce lung injury. Therefore, emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours. For acute or short-term repeated exposures to petroleum distillates or related hydrocarbons:

- Primary threat to life, from pure petroleum distillates ingestion and/or inhalation, is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO2 50 mm Hg) should be intubated.
- Arrythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- A chest x-ray should be taken immediately after stabilisation of breathing and circulation of document aspiration and detect the presence of pneumothorax.
- Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g., Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.
- Lavage is indicated in patients who require decontamination; ensure use of cuffed endotracheal tube in adult patients. [Ellenhorn and Barceloux: Medical Toxicology]

5. FIRE FIGHTING MEASURES

Special hazards arising from the substrate or mixture

Fire Incompatibility

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

Advice for Firefighters

Fire Fighting

- Alert fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves in the event of a fire.

- Prevent, by any means available, spillage from entering drains or water course.

Extinguishing Media

- Water spray or fog.
- Alcohol stable foam.
- Dry chemical powder.
- Carbon dioxide.

Do not use water jet to fight fire.

Fire/Explosion Hazard

- Liquid and vapour are highly flammable.
- Severe fire hazard when exposed to heat, flame and/or oxidisers.
- Vapour may travel a considerable distance to source of ignition.
- Heating may cause expansion or decomposition leading to violent rupture of containers.

Combustion products include:
carbon dioxide (CO2)
other pyrolysis products typical of burning organic material.
Contains low boiling substances: Closed containers may rupture due to pressure buildup under fire conditions.
May emit clouds of acrid smoke.

6. ACCIDENTAL RELEASE MEASURES

Methods and material for containment and clean up

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 substances, by suing 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.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Safe Handling

- 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.

Contains low boiling substances:
Storage in sealed containers may result in pressure buildup causing rupture of containers not rated appropriately.

- Check for bulging containers.
- Vent periodically
- Always release caps or seals slowly to ensure slow dissipation of vapours

DO NOT allow clothing wet with material to stay in contact with skin
Electrostatic discharge may be generated during pumping – this may result in fire.
Ensure electrical continuity by bonding and grounding (earthing) all equipment.
Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (<=1 m/sec until fill pipe submerged to twice its diameter, then <=7 m/sec).
Avoid splash filling.

Other Information

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- Store in original containers in approved flame-proof area.
- No smoking, naked lights, heat or ignition sources.
- **DO NOT** store in pits, depression, basement or areas where vapours may be trapped.
- Keep containers securely sealed.

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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

Occupational Exposure Limits (EOL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
New Zealand Workplace Exposure Standards (WES)	n-hexane	Hexane, Other isomers	500 ppm / 1760 mg/m3	3500 mg/m3 / 1000 ppm	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	n-hexane	Hexane (n-Hexane)	20 ppm / 72 mg/m3	Not Available	Not Available	(bio) - Exposure can also be estimated by biological monitoring oto – Ototoxin

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
2-methylpentane	1,000 ppm	11000** ppm	66000*** ppm
naphtha petroleum, light, hydrotreated.	1,000 mg/m3	11,000 mg/m3	66,000 mg/m3
n-hexane	260 ppm	Not Available	Not Available
polydimethylsiloxane	65 mg/m3	720 mg/m3	4,300 mg/m3

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
2-methylpentane	E	≤ 0.1 ppm
naphtha petroleum, light, hydrotreated.	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

CARE: Use of a quantity of this material in confined space or poorly ventilated area, where rapid buildup of concentrated atmosphere may occur, could require increased ventilation and/or protective gear

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.

Individual Protection Measures, such as personal protective equipment

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

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 as 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 and shall dissipate static electricity from the body to reduce the possibility of ignition of volatile compounds.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	CLEAR WATER-WHITE LIQUID WITH A MILD	**Solubility (water)**	Immiscible

	SOLVENT ODOUR; NOT MISCIBLE WITH WATER		
Physical State	LIQUID	**Relative Density**	0.6694 (Water=1)
Odour	NOT AVAILABLE	**VOC g/L**	649.3
Odour Threshold	NOT AVAILABLE	**Partition coefficient n-octanol / water**	NOT AVAILABLE
Ph (as supplied)	NOT APPLICABLE	**% Volatiles**	NOT AVAILABLE
Vapour Pressure (kPa)	21 @20C	**Flammability**	HIGHLY FLAMMABLE
Vapour Density	> 1 (Air = 1)	**Flash Point**	<-18 (TCC)
Melting Point / Freezing Point (°C)	<-60	**Upper Explosion Limit (%)**	9.0
Initial Boiling Point and Boiling Range (°C)	60 (Initial)	**Lower Explosion Limit (%)**	1.7
Evaporation Rate	NOT AVAILABLE	**Auto-ignition Temperature (°C)**	254
Decomposition Temperature (°C)	NOT AVAIALBLE	**Viscosity (cSt)**	NOT AVAILABLE
Molecular Weight (g/mol)	NOT APPLICABLE	**Taste**	NOT AVAILABLE
Explosive Properties	NOT AVAILABLE	**Oxidising Properties**	NOT AVAILABLE
Surface Tension (dyn/cm or mN/m)	NOT AVAIALBLE	**Gas Group**	NOT AVAILABLE

10. STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical Stability	Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of Hazardous Reactions	See section 7
Conditions to avoid	See section 7
Incompatible Materials	See section 7
Hazardous Decomposition Products	See section 5

11. TOXICOLOGICAL INFORMATION

Information on toxicological Effects

Inhaled

The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.
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.
Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.
2-methylpentane has not shown to damage the nervous system (unlike n-hexane).

Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination.
Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal.

Material is highly volatile and may quickly form a concentrated atmosphere in confined or unventilated areas. The vapour may displace and replace air in breathing zone, acting as a simple asphyxiant. This may happen with little warning of overexposure.

Ingestion

Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733)
Accidental ingestion of the material may be damaging to the health of the individual.

Skin Contact

This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition.
Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. Skin absorption of 2-methylpentane from laboratory studies is slower compared to toluene.
Open cuts, abraded or irritated skin should not be exposed to this material

Eye

There is some evidence to suggest that this material can cause eye irritation and damage in some persons.

Chronic

Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems.
Harmful: danger of serious damage to health by prolonged exposure through inhalation.
This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects.
Ample evidence from experiments exists that there is a suspicion this material directly reduces fertility.
Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.
gamma-diketones are generally toxic to the nervous system. They can occur as commercial products or as metabolic products.

MAC Siliglide Food Grade Silicone Fluid	**TOXICITY**	**IRRITATION**
	Not Available	Not Available
2-methylpentane	**TOXICITY**	**IRRITATION**
	Oral (Rat) LD50: ~15.84 mg/kg[1]	Not Available
Naphtha Petroleum, Light, Hydrotreated	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: >1900 mg/kg[1]	Eye: no adverse effect observed (not irritating)[1]
	Inhalation(Rat) LC50: >4.42 mg/L4h[1]	Skin: adverse effect observed (irritating)[1]
	Oral (Rat) LD50: >2000 mg/kg[1]	
n-hexane	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: >2000 mg/kg[1]	Eye(rabbit): 10 mg - mild
	Inhalation(Rat) LC50: 48000 ppm4h[2]	
	Oral (Rat) LD50: 28710 mg/kg[2]	
polydimethylsilox-ane	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: >3000 mg/kg[2]	Eye (rabbit): 100 mg/1h - mild
	Oral (Rat) LD50: >35000 mg/kg[2]	

Polydimethyl Siloxane	No toxic response noted during 90 day subchronic inhalation toxicity studies The no observable effect level is 450 mg/m3. Non-irritating and non-sensitising in human patch test. [Xerox]* Siloxanes may impair liver and hormonal function, as well as the lung and kidney. They have not been found to be irritating to the skin and eyes. They may potentially cause cancer (tumours of the womb in females) and may cause impaired fertility or infertility.
Naphtha Petroleum, Light, Hydrotreated & N-Hexane & Polydimethyl Siloxane	The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

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*

12. ECOLOGICAL INFORMATION

Toxicity

MAC Siliglide Food Grade Silicone Fluid	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	504h	Crustacea	0.17mg/1	2
	LC50	96h	Fish	4.26mg/1	2
Naphtha petroleum, light, hydroheated.	EC50	96h	Algae or other aquatic plants	64mg/1	2
	EC50	48h	Crustacea	0.64mg/1	2
polydimethylsiloxane	Not Available	Not Available	Not Available	Not Available	Not Available
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*				

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.

DO NOT discharge into sewer or waterways.

Persistence and Degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
2-methylpentane	LOW	LOW
n-hexane	LOW	LOW

Bioaccumulative Potential

Ingredient	Bioaccumulation
2-methylpentane	LOW (LogKOW = 3.2145)
n-hexane	MEDIUM (LogKOW = 3.9)

Mobility in Soil

Ingredient	Mobility
2-methylpentane	LOW (KOC = 124.9)
n-hexane	LOW (KOC = 149)

Legislation Dispose of in accordance with relevant, local legislation.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Product / Packaging Disposal

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.
- Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus (after admixture with suitable combustible material).
- Decontaminate empty containers.

Ensure that the hazardous substance is disposed in accordance with the Hazardous Substances (Disposal) Notice 2017

Disposal Requirements

Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and cleaned out from the package. The package must be disposed according to the manufacturer's directions taking into account the material it is made of. Packages which hazardous content have been appropriately treated and removed may be recycled.
The hazardous substance must only be disposed if it has been treated by a method that changed the characteristics or composition of the substance and it is no longer hazardous.

14. TRANSPORT INFORMATION

Labels Required

Marine Pollutant

HAZCHEM 3YE

Land Transport (UN)

UN Number or ID Number	1208
UN Proper Shipping Name	Hexanes (contains 2-methylpentane)
Transport Hazard Class(es)	Class 3 Subrisk Not Applicable
Packing Group	II
Environmental Hazard	Environmentally Hazardous
Special Precautions for User	

Special Provisions	Not Applicable
Limited Quantity	Not Applicable

Air Transport (ICAO-IATA / DGR)

UN Number 1208

UN Proper Shipping Name Hexanes (contains 2-methylpentane)

Transport Hazard Class(es)

ICAO/IATA Class	3
ICAO / IATA Subrisk	Not Applicable
ERG Code	3H

Packing Group III

Environmental Hazard Environmentally Hazardous

Special Precautions For User

Special provisions	Not Applicable
Cargo Only Packing Instructions	364
Cargo Only Maximum Qty / Pack	60 L
Passenger and Cargo Packing Instructions	353
Passenger and Cargo Maximum Qty / Pack	5 L
Passenger and Cargo Limited Quantity Packing Instructions	Y341
Passenger and Cargo Limited Maximum Qty / Pack	1 L

Sea Transport (IMDG-Code / GGVSee)

UN Proper Shipping Name HEXANES (contains 2-methylpentane)

Transport Hazard Class(es)

IMDG Class	3
IMDG Subrisk	Not Applicable

Packing Group II

Environmental Hazard Marine Pollutant

Special Precautions for User

EMS Number	F-E, S-D
Special provisions	Not Applicable
Limited Quantities	1 L

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

Not Applicable

Transport in bulk in accordance with the IGC Code

Product name	Ship Type
2-methylpentane	Not Available
naphtha petroleum, light, hydrotreated.	Not Available
n-hexane	Not Available
polydimethylsiloxane	Not Available

15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations / Legislation Specific for the Substance or Mixture

This substance is to be managed using the conditions specified in an applicable Group Standard

HSR Number	Group Standard
HSR002650	Solvents (Flammable) Group Standard 2017

Please refer to Section 8 of the SDS for any applicable tolerable exposure limit or Section 12 for environmental exposure limit.

Hazardous Substance Location

Subject to the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Hazard Class	Quantity (Closed Containers)	Quantity (Open Containers)
3.1B	100 L in containers more than 5 L	50 L
3.1B	250 L in containers up to and including 5 L	50 L

Certified Handler

Subject to Part 4 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Class of substance	Quantities
Not Applicable	Not Applicable

Maximum Quantities of certain Hazardous Substances permitted on Passenger Service Vehicles

Subject to Regulation 13.14 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Hazard Class	Gas (aggregate water capacity in mL)	Liquid (L)	Solid (kg)	Maximum quantity per package for each classification
3.1B				1 L

16. OTHER INFORMATION

Additional Information

ASPHYXIANTS (1): reduce the oxygen concentration by displacement, when present in the atmospheres, in high concentrations. As most simple asphyxiants are odourless, atmospheres deficient in oxygen do not provide adequate sensory warning of danger. Therefore, it is not generally appropriate to recommend an exposure standard for each asphyxiant, but instead warn of the need to maintain oxygen concentrations.

	Some asphyxiants may be given an exposure standard, due to their potential for narcotic effects at high concentrations, or an explosion hazard.
Asphyxiants (2)	There is a significant hazard associated with workers entering poorly, ventilated areas (e.g. tanks) where oxygen levels may be deficient. An air supplied breathing apparatus may be required if adequate ventilation is not ensured. Refer to AS/NZS 2865 - Safe Working in a Confined Space.
Respirators	In general, the best practice to avoid exposure is to use engineering controls, such as adequate ventilation, rather than the use of respirators (which should be limited). If respiratory equipment must be worn, ensure correct respirator selection and training is undertaken. Some respirators may be extremely uncomfortable, when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.
Abbreviations	Mg/m3 - Milligrams per cubic metre ppm –Parts Per Million M - moles per litre, a unit of measure of concentration. pH - relates to hydrogen ion concentration - this value will relate to a scale of 0 – 14, where 0 is highly acidic and 14 is highly alkaline. TWA/ES - Time Weighted Average or Exposure Standard. CAS# - Chemical Abstract Service number - uniquely identifies chemical compounds. CNS - Central Nervous System NOS - Not Otherwise Specified IARC - International Agency for Research on Cancer.
Personal Protective Equipment	The recommendations for protective equipment contained within this SDS report are provided as a guide only, when dealing with an abnormal situation. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered, before the final selection of personal protective equipment is made.
Health Effects From Exposure	It should be noted that the effects from excess exposure to this product would depend on several factors, including duration of exposure, quantity involved, effectiveness of control measures used; protective equipment and method of application. Given that, it is impractical to prepare a SDS report, which would encompass all possible scenarios, it is anticipated that users will assess the risks in an emergency and apply appropriate control methods.
Report Status	This report is based upon information provided by ingredient manufacturers, and third party experts. We believe that the information represents the current state of knowledge about safety and handling precautions that are appropriate for this product. Further clarification regarding any aspect of the product should be obtained directly from the Chief Chemist at Arandee Ltd. While Arandee has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy, or completeness. As far as lawfully possible, Arandee accepts no liability for any loss, injury, or damage (including consequential loss) which may be suffered, or incurred by any person, because of their reliance upon the information contained in this Safety Data Sheet.