1. Identification of Substance & Company

Product	
Product name	Oxyshock
Other names	Potassium oxy mono persulphate blend
HSNO approval	HSR002632
Approval description	Oxidising [5.1.1], Corrosive Substances Group Standard 2017
UN number	3085
DG class	5.1, 8
Proper Shipping Name	OXIDISING SOLID, CORROSIVE, n.o.s.
Packaging group	III
Hazchem code	1W
Uses	Chlorine free oxidiser

Company Details	
Company	**Poolwise Ltd**
Physical Address	93 Ireland Road, Mt Wellington, 1060, Auckland New Zealand
Telephone	09 527 0753
Fax	09 527 4189
Website	www.poolwise.co.nz

Emergency Telephone Number: 0800 764 766

2. Hazard Identification

Approval

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR002632, Oxidising [5.1.1], Corrosive Substances Group Standard 2017). The substance has been assessed as hazardous according to the criteria in the Hazardous substances (Minimum Degrees of Hazard) Notice 2017.

Classes	Hazard Statements
5.1.1C	H270 - May intensify fire; oxidizer.
6.1D (oral)	H302 - Harmful if swallowed.
6.1E (respiratory irritation)	H335 - May cause respiratory irritation.
8.2C	H314 - Causes severe skin burns and eye damage.
8.3A	H318 - Causes serious eye damage.
6.5A	H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
6.5B	H317 - May cause an allergic skin reaction.
9.1D	H402 - Harmful to aquatic life.
9.2C	H423 - Harmful to the soil environment.
9.3C	H433 - Harmful to terrestrial vertebrates.

SYMBOLS

DANGER

Other Classifications

There are no other classifications that are known to apply.

Precautionary Statements

P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.
P210 - Keep away from heat. No smoking.
P220 - Keep/Store away from clothing/combustible materials.
P221 - Take any precaution to avoid mixing with combustibles.
P260 - Do not breathe dust.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P285 - In case of inadequate ventilation wear respiratory protection.*
P301+P312 - IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P304+P341 - IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.
P312 - Call a POISON CENTRE or doctor/physician if you feel unwell.
P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P363 - Wash contaminated clothing before reuse.
P310 - Immediately call a POISON CENTRE or doctor/physician.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTRE or doctor/physician.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.

3. Composition / Information on Ingredients

Component	CAS/ Identification	Conc (%)
Potassium hydrogen peroxymonosulphate	70693-62-8	Approx. 50%
Sodium peroxydisulfate	7775-27-1	Approx. 50%

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

4. First Aid

General Information

If medical advice is needed, have product container or label at hand. You should call the National Poisons Centre if you feel that you may have been harmed, burned or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service).

Recommended first aid facilities Ready access to running water is required. Accessible eyewash is required.

Exposure

Swallowed IF SWALLOWED: Call a POISON CENTRE or doctor/physician immediately. Rinse mouth. Do NOT induce vomiting.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor/physician.

Skin contact IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTRE or doctor/physician.

Inhaled IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTRE or doctor/physician if you feel unwell. If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.

Advice to Doctor

Treat symptomatically

5. Firefighting Measures

Fire and explosion hazards:	This product is an oxidising agent. Oxidising materials can increase the intensity of fire. There is a moderate risk of an explosion from this product if commercial quantities are involved in a fire.
Suitable extinguishing substances:	Carbon dioxide, extinguishing powder, foam, fog sprays, water jets.
Unsuitable extinguishing substances:	Unknown.
Products of combustion:	Oxides of sulphur. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.
Protective equipment:	Self-contained breathing apparatus. Safety boots, non-flammable overalls, gloves, hat and eye protection.
Hazchem code:	1W

6. Accidental Release Measures

Containment	If greater than 1000kg is stored, secondary containment and emergency plans to manage any potential spills must be in place. In all cases design storage to prevent discharge to storm water.
Emergency procedures	In the event of spillage alert the fire brigade to location and give brief description of hazard. Stop the source of the leak, if safe to do so. Shut off all possible sources of ignition. Wear protective equipment to prevent skin, eye and respiratory exposure. Clear area of any unprotected personnel. Contain using sand, earth or vermiculite. Do not use sawdust. Prevent by whatever means possible any spillage from entering drains, sewers, or water courses. (If this occurs contact your regional council immediately).
Clean-up method	Use absorbent (soil, sand or other inert material). Rags are not recommended for the clean-up of spills, as they may create fire or environmental hazard. Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.
Disposal	Not applicable
Precautions	Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation.

7. Storage & Handling

Storage	Avoid storage of harmful substances with food. Store out of reach of children. Containers should be kept closed in order to minimise contamination. Keep from extreme heat and open flames. Avoid contact with incompatible substances as listed in Section 10. Location compliance certificates must be available if storing >1000kg (closed), >100kg (in use). Containers (and outer packaging) must bear the prescribed labelling, including the Hazchem code, UN number, GHS diamonds and name of contents.
Handling	Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements. Avoid skin and eye contact and inhalation of vapour, mist or aerosols.

8. Exposure Controls / Personal Protective Equipment

Workplace Exposure Standards

A workplace exposure standard (WES) has not been established by WorkSafe NZ for this product. There is a general limit of 3mg/m^3 for respirable particulates and 10mg/m^3 for inhalable particulates when limits have not otherwise been established.

NZ Workplace Exposure Stds (2016)	Ingredient	WES-TWA*	WES-STEL
	Potassium hydrogen peroxymonosulphate	Not listed	Not listed
	Sodium peroxydisulfate	Not listed	Not listed

* These workplace exposure standards are also Prescribed Exposure Standards (PES) under the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016.

Engineering Controls

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety at Work Act (2015) and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016. Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation.

Personal Protective Equipment

Eyes

Protect eyes with goggles, safety glasses or full face mask. Avoid wearing contact lenses. Select eye protection in accordance with AS/NZS 1337.

Skin

Avoid any skin contact. Wear overalls, rubber boots and impervious gloves. Rubber or PVC gloves are recommended. Protective gloves or suitably resistant material must comply with AS 2161. Replace frequently. Gloves should be checked for tears or holes before use. Protective clothing must comply with AS 2919, AS3765.1 or AS3765.2. PVC or rubber boots must comply with AS/NZS 2210.2 and selected and maintained in accordance with AS/NS2210.1. Remove protective clothing and wash exposed areas with soap and water prior to eating, drinking or smoking.

Respiratory

A respirator when airborne concentrations approach the WES (section 8). Respirators must have filters appropriate to the duty and comply with AS/NZS1716 and selected, used and maintained in accordance with AS/NS 1715. Use a respirator with a particulate filter. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order. Fit testing and clear guidelines and training for use and maintenance of PPE are necessary.

WES Additional Information

Not applicable

9. Physical & Chemical Properties

Appearance	white free flowing crystalline solid
Odour	no odour
pH	no data
Vapour pressure	negligible
Viscosity	no data
Boiling point	no data
Volatile materials	0%
Freezing / melting point	decomposes before melting
Solubility	soluble
Specific gravity / density	no data
Flash point	no data
Danger of explosion	non explosive
Auto-ignition temperature	no data
Upper & lower flammable limits	no data
Corrosiveness	corrosive

10. Stability & Reactivity

Stability	Stable
Conditions to be avoided	Oxidising substance - keep away from sources of ignition and flammable materials (see below).
Incompatible groups	Reducing agents, zinc, tin, aluminium and their alloys, combustible materials
Substance Specific Incompatibility	none known
Hazardous decomposition products	Oxides of sulphur
Hazardous reactions	none known

11. Toxicological Information

Summary

IF SWALLOWED: may be harmful. This mixture is likely to cause burns to the mouth and gastrointestinal tract.
IF IN EYES: may cause eye damage.
IF ON SKIN: may cause skin burn
IF INHALED: dust is corrosive to the respiratory tract. Symptoms will include extreme pain in nose and throat and copious secretion of mucous in the nose and throat. Some sensitised individuals may experience an allergic reaction, e.g. asthma if exposed to this substance (Sodium peroxydisulfate).

Supporting Data

Acute	**Oral**	Using LD_{50}'s for ingredients, the calculated LD_{50} (oral, rat) for the mixture is 300 and 2000mg/kg. Data considered includes: Sodium peroxydisulfate 895mg/kg (rat).
	Dermal	No evidence of dermal toxicity.
	Inhaled	No evidence of inhalation toxicity, but may be a respiratory irritant.
	Eye	The mixture is considered to be corrosive to the eye. Potassium hydrogen peroxymonosulphate is considered to be corrosive.
	Skin	The mixture is considered to be corrosive to the skin. Potassium hydrogen peroxymonosulphate is considered to be corrosive.
Chronic	**Sensitisation**	Sodium peroxydisulfate is known to be a contact and respiratory sensitizer.
	Mutagenicity	No ingredient present at concentrations > 0.1% is considered a mutagen.
	Carcinogenicity	No ingredient present at concentrations > 0.1% is considered a carcinogen.
	Reproductive / Developmental	No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation.
	Systemic	No ingredient present at concentrations > 1% is considered a target organ toxicant.
	Aggravation of existing conditions	None known.

12. Ecological Data

Summary

This mixture is considered harmful towards aquatic organisms, harmful towards soil organisms and terrestrial vertebrates.

Supporting Data

Aquatic	Using EC_{50}'s for ingredients, the calculated EC_{50} for the mixture is between 1 and 100 mg/L. Data considered includes: Sodium peroxydisulfate 64.6mg/L (48hr, Daphnia magna).
Bioaccumulation	No data
Degradability	No data
Soil	Sodium peroxydisulfate is classed 9.2C by EPA.
Terrestrial vertebrate	See acute toxicity.
Terrestrial invertebrate	No evidence of toxicity towards terrestrial invertebrates.
Biocidal	no data

13. Disposal Considerations

Restrictions	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
Disposal method	Disposal of this product must comply with the Hazardous Substances (Disposal) Notice 2017 and the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment.
Contaminated packaging	Disposal of contaminated packaging must comply with the Hazardous Substances (Disposal) Notice 2017 clause 12. Ensure that the package is renedered incapable of containing any substance and is disposed in a manner that is consistent with the requirements of the substance it contained and the material of the package. If possible reuse or recycle packaging.

14. Transport Information

Land Transport Rule: Dangerous Goods 2005 - NZS 5433:2007
Transport according to NZS 5433 (Transport of Hazardous Substances on Land). Considered a dangerous good for transport.

UN number:	3085	**Proper shipping name:**	OXIDISING SOLID, CORROSIVE, n.o.s.
Class(es)	5.1, 8	**Packing group:**	III
Precautions:	Oxidiser, corrosive	**Hazchem code:**	1W

15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR002632, Oxidising [5.1.1], Corrosive Substances Group Standard 2017.
All ingredients appear on the NZIoC.

Specific Controls

Key workplace requirements are:

SDS	To be available within 10 minutes in workplaces storing any quantity.
Inventory	An inventory of all hazardous substances must be prepared and maintained.
Packaging	All hazardous substances should be appropriately packaged including substances that have been decanted, transferred or manufactured for own use or have been supplied
Labelling	Must comply with the Hazardous Substances (Labelling) Notice 2017.
Emergency plan	Required if > 1000kg is stored.
Certified handler	Not required.
Tracking	Not required.
Bunding & secondary containment	Required if > 1000kg is stored.
Signage	Required if > 1000kg is stored.
Location compliance certificate	Required if > >1000kg (closed), >100kg (in use) is stored.
Flammable zone	Must be established if any quantity is stored.
Fire extinguisher	If > 500kg present.

Note: The above workplace requirements apply if only this particular substance is present. The complete set of controls for a location will depend on the classification and total quantities of other substances present in that location.

Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health and Safety at Work Act 2015 and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, local Council Rules and Regional Council Plans.

16. Other Information

Abbreviations

Approval Code	Approval HSR002632, Oxidising [5.1.1], Corrosive Substances Group Standard 2017 Controls, EPA. www.epa.govt.nz
CAS Number	Unique Chemical Abstracts Service Registry Number
Ceiling	Ceiling Exposure Value: The maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time.
Controls Matrix	List of default controls linking regulation numbers to Matrix code (e.g. T1, I16).
EC_{50}	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
EPA	Environmental Protection Authority (New Zealand)
HAZCHEM Code	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
HSNO	Hazardous Substances and New Organisms (Act and Regulations)
IARC	International Agency for Research on Cancer
LEL/UEL	Lower Explosive Limit/ Upper Explosive Limit
LD_{50}	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
LC_{50}	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
NZIoC	New Zealand Inventory of Chemicals
MSDS (SDS)	Material Safety Data Sheet (or Safety Data Sheet)

PES	Prescribed Exposure Standard means a WES or a biological exposure standard that is prescribed in a regulation, a safe work instrument or an approval under HSNO (including group standards).
STEL	Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded
TWA	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
UN Number	United Nations Number
WES	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed during work hours (usually 8 hours, 5 days a week). The WES relates to exposure that has been measured by personal monitoring using procedures that gather air samples in the worker's breathing zone.

References

Data	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID).
Controls	EPA notices, www.epa.govt.nz, Health and Safety at Work (Hazardous Substances) Regulations 2017, www.legislation.govt.nz
WES	The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their web site – www.worksafe.govt.nz.
Other References:	Suppliers SDS, EU ECHA, ingredients SDS's, ChemIDplus

Review

Date	**Reason for review**
August 2018	Not applicable – new SDS

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