

Safety Data Sheet

AQUAPAC

Water Treatment & Specialty Chemicals

Hazardous Chemical, Dangerous Goods

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name: **Hydrogen Peroxide**

Synonyms
peroxide

Product Code

Recommended use: Bleaching of organic compounds and materials Reagent Water treatment

Supplier: Aquapac Pty Ltd
ABN: 36 114 118 311
Street Address: 88 Lee Holm Road
St Marys NSW 2760
Telephone: 02 9673 1192
Facsimile: 02 9673 1193

Emergency Telephone number: 1800 HELP

2. HAZARDS IDENTIFICATION

This material is hazardous according to health criteria of Safe Work Australia.



Signal Word
Danger

Hazard Classifications

Oxidising Liquids - Category 2
Acute Toxicity - Oral - Category 4
Acute Toxicity - Inhalation - Category 4
Corrosive to Metals - Category 1
Skin Corrosion/Irritation - Category 1A
Serious Eye Damage/Irritation - Category 1

Hazard Statements

H272 May intensify fire; oxidizer.
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H332 Harmful if inhaled.

Prevention Precautionary Statements

P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P220 Keep/Store away from clothing/combustible materials/(insert appropriate material).
P221 Take any precaution to avoid mixing with combustibles/(insert incompatible materials).
P234 Keep only in original container.
P260 Do not breathe dust, fume, gas, mist, vapours or spray.
P261 Avoid breathing dust, fume, gas, mist, vapours or spray..

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P264	Wash hands, face and all exposed skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective clothing, gloves, eye/face protection and suitable respirator.

Response Precautionary Statements

P101	If medical advice is needed, have product container or label at hand.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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 CENTER or doctor/physician.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P321	Specific treatment (see product label).
P330	Rinse mouth.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use (insert appropriate media) for extinction.
P390	Absorb spillage to prevent material damage.

Storage Precautionary Statements

P405	Store locked up.
P406	Store in original container with a resistant inner liner.

Disposal Precautionary Statement

P501	Dispose of contents/container in accordance with local, regional, national and international regulations.
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Poison Schedule: S6. Poison

DANGEROUS GOOD CLASSIFICATION

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

Dangerous Goods Class: 5.1

Subrisk 1: 8

3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO	PROPORTION
Hydrogen peroxide (H ₂ O ₂)	7722-84-1	9-35% % (w/w)
Water	7732-18-5	BALANCE %
Ingredients determined to be Non-Hazardous		Balance

4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

Inhalation: Remove victim from contaminated area, avoiding becoming a victim yourself, and lay the victim down. Keep them warm and rested. Remove any prostheses from the mouth to prevent airway blockages. Seek medical advice as inhalation may cause lung oedema. Transport to a hospital, or doctor/physician.

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Skin Contact: Immediately flush the area and clothing with large amounts of water, using safety showers where available. Remove any contaminated items of clothing, including footwear. Continue flushing with excess water until advised to stop by a Poison Center or medical expert. Transport to a hospital, or doctor/physician.

Eye contact: Immediately flush the eye with excess water. Remove any contact lenses and continue flushing the eye until advised otherwise by Poison Center or a doctor/physician; but no less than 15 min.

Ingestion: DO NOT induce vomiting. Rinse mouth with water; do not give a patient with reduced awareness or sleepiness/fatigue water to drink. Take precautions to avoid choking if vomiting occurs, lean the patient forward or on their left side. Transport to a hospital, or doctor/physician.

Notes to physician: Treat symptomatically. Can cause corneal burns. Lung oedema is possible; observation should be long enough to ensure no oedema has occurred. Corneal damage is likely to occur with eye exposure. Gas may build up (hydrogen or oxygen gas) in the patient and may require release.

5. FIRE FIGHTING MEASURES

Hazchem Code: 2P

Suitable extinguishing media: If material is involved in a fire use water fog (or if unavailable fine water spray), alcohol resistant foam, standard foam, dry agent (carbon dioxide, dry chemical powder).

Specific hazards: May intensify fire; oxidiser.

Fire fighting further advice: On burning or decomposing may emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion or decomposition.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILLS

Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapours or dust. Wipe up with absorbent (clean rag or paper towels). Collect and seal in properly labelled containers or drums for disposal.

LARGE SPILLS

If safe to do so, shut off all possible sources of ignition. Clear area of all unprotected personnel. Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Use a spark-free shovel. Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.

Dangerous Goods – Initial Emergency Response Guide No: 31

7. HANDLING AND STORAGE

Handling: Avoid eye contact and skin contact. Avoid inhalation of vapour, mist or aerosols.

Storage: Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Store away from sources of heat and/or ignition. Store locked up. Store in corrosive resistant container with a resistant inner liner. Keep container standing upright. Keep containers closed when not in use - check regularly for leaks.

This material is classified as a Division 5.1 Oxidising Substance, Class 8 Corrosive as per the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and/or the "New Zealand NZS5433: Transport of Dangerous Goods on Land" and must be stored in accordance with the relevant regulations.

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This material is a Scheduled Poison Schedule 6 (Poison) and must be stored, maintained and used in accordance with the relevant regulations.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National occupational exposure limits:

	TWA		STEL		NOTICES
	ppm	mg/m3	ppm	mg/m3	
Hydrogen peroxide	1	1.4	-	-	-

As published by Safe Work Australia.

TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

STEL (Short Term Exposure Limit) - the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept too as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

Biological Limit Values: As per the "National Model Regulations for the Control of Workplace Hazardous Substances (Safe Work Australia)" the ingredients in this material do not have a Biological Limit Allocated.

Engineering Measures: Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use only in well ventilated areas. Use with local exhaust ventilation or while wearing appropriate respirator.

Personal Protection Equipment: SAFETY SHOES, GLOVES, APRON, SAFETY GLASSES.

Wear safety shoes, gloves, apron, safety glasses. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

Hygiene measures: Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid contact with clothing. Avoid eye contact and skin contact. Avoid inhalation of vapour, mist or aerosols. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form: Clear Liquid
Colour: Colourless
Odour: Odourless

Solubility: Miscible
Specific Gravity (20 °C): 1.71g/mL
Vapour Pressure (20 °C): 21.1mmHg @25C
Melting Point/Range (°C): -0.43

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Boiling Point/Range (°C): 150.2
pH: 2.73 (neat solution)
Viscosity: 1.249 @20C

(Typical values only - consult specification sheet)
N Av = Not available, N App = Not applicable

10. STABILITY AND REACTIVITY

Chemical stability: Decomposes in UV light; can produce flammable hydrogen gas. Store as cold as possible without freezing.

Conditions to avoid: Avoid transferring into another container, as impurities can cause significant heat release. AVOID direct sunlight; UV causes decomposition. AVOID excess heat; causes decomposition. AVOID iron, cobalt and copper or their alloys. Avoid metal oxides, acids or bases. Do NOT use equipment with exposed metal surfaces to handle Hydrogen Peroxide. DO NOT FREEZE: causes extreme shock and heat sensitivity, and may result in explosions.

Incompatible materials: Incompatible with most other organic compounds. Store only in original container. Incompatible with most metals including iron, copper, cobalt, heavy metals. Avoid ALL reducing agents, alcohols, ammonia, carboxylic acids, ethers, acetic acid, aniline, ethyl acetate, glycols, ketene, ketones, vinyl acetate, 1,3,5-trioxane, triethyltinhydroperoxide, mercurous chloride. AVOID alkalis.

Hazardous decomposition products: Decomposes to form hydrogen gas and/or oxygen gas; containers can explode from internal pressure.

Hazardous reactions: No known hazardous reactions.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Acute Effects

Inhalation: Harmful if inhaled. Inhalation of small amounts of mist/fumes may result in lung oedema or other highly hazardous effects. Dizziness, vomiting, diarrhoea, irritability, insomnia can be caused by excessive levels of inhalation. Poisoning type symptoms include tremors, numbness of extremities, convulsions, oedema, coma and shock. Hydrogen peroxide has poor warning qualities.

Skin contact: Can produce severe chemical burns to the skin. Rapidly dries and bleaches the skin; chemical burns occur from prolonged contact.

Ingestion: Harmful if swallowed. May be harmful; ingestion rates of less than 150g may be fatal or may produce serious damage to health. Can cause serious chemical burns in the mouth and/or gastrointestinal tract. When in the stomach, can evolve large volumes of oxygen gas causing severe distending of the stomach or gastrointestinal tract.

Eye contact: Can cause serious chemical burns to the eye. Considered corrosive to the eye when above 10% concentration.

Acute toxicity

Inhalation: This material has been classified as a Category 4 Hazard. Acute toxicity estimate (based on ingredients): 10 - 20 mg/L

Skin contact: This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >2,000 mg/Kg

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Ingestion: This material has been classified as a Category 4 Hazard. Acute toxicity estimate (based on ingredients): 300 - 2,000 mg/Kg

LD50 (Rat): 805 mg/kg

Corrosion/Irritancy: Eye: this material has been classified as a Category 1 Hazard (irreversible effects to eyes). Skin: this material has been classified as a Category 1A Hazard (irreversible effects to skin).

Eye irritant (Rabbit): 5% slightly irritating
Skin irritant (Rabbit): 50% SEVERE IRRITATION

Sensitisation: Inhalation: this material has been classified as not a respiratory sensitiser. Skin: this material has been classified as not a skin sensitiser.

Aspiration hazard: This material has been classified as non-hazardous.

Specific target organ toxicity (single exposure): This material has been classified as non-hazardous.

Chronic Toxicity

Mutagenicity: This material has been classified as non-hazardous.

Carcinogenicity: This material has been classified as non-hazardous.

Reproductive toxicity (including via lactation): This material has been classified as non-hazardous.

Specific target organ toxicity (repeat exposure): This material has been classified as non-hazardous.

12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

Acute aquatic hazard: This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >100 mg/L

48hr EC50 (Daphnia magna): 5.6mg/L

Long-term aquatic hazard: This material has been classified as non-hazardous. Non-rapidly or rapidly degradable substance for which there are adequate chronic toxicity data available OR in the absence of chronic toxicity data, Acute toxicity estimate (based on ingredients): >100 mg/L, where the substance is not rapidly degradable and/or BCF < 500 and/or log K_{ow} < 4.

Ecotoxicity: No information available.

Persistence and degradability: No information available.

Bioaccumulative potential: Risk of bioaccumulation in an aquatic species is low.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Persons conducting disposal, recycling or reclamation activities should ensure that appropriate personal protection equipment is used, see "Section 8. Exposure Controls and Personal Protection" of this SDS.

If possible material and its container should be recycled. If material or container cannot be recycled, dispose in accordance with local, regional, national and international Regulations.

14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".



UN No: 2014
Dangerous Goods Class: 5.1
Subrisk 1: 8
Packing Group: II
Hazchem Code: 2P
Emergency Response Guide No: 31

Proper Shipping Name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION

Segregation Dangerous Goods: Not to be loaded with explosives (Class 1), flammable gases (Class 2.1), toxic gases (Class 2.3), flammable liquids (Class 3), flammable solids (Class 4.1), spontaneously combustible substances (Class 4.2), dangerous when wet substances (Class 4.3), organic peroxides (Class 5.2), radioactive substances (Class 7), corrosive substances (Class 8), fire risk substances or combustible liquids. Also note that fire risk substances including dangerous goods of Class 6 or Class 9 which are fire risk substances are incompatible with dangerous goods of Class 1, Class 5.1 and Class 5.2. Exemptions may apply.

MARINE TRANSPORT

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.



UN No: 2014
Dangerous Goods Class: 5.1
Subrisk 1: 8
Packing Group: II

Proper Shipping Name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION

AIR TRANSPORT

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

TRANSPORT PROHIBITED under the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air in passenger and cargo aircraft.



UN No: 2014
Dangerous Goods Class: 5.1

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Subrisk 1: 8
Packing Group: None
Proper Shipping Name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION

15. REGULATORY INFORMATION

This material is not subject to the following international agreements:

- Montreal Protocol (Ozone depleting substances)
- The Stockholm Convention (Persistent Organic Pollutants)
- The Rotterdam Convention (Prior Informed Consent)
- Basel Convention (Hazardous Waste)
- International Convention for the Prevention of Pollution from Ships (MARPOL)

This material/constituent(s) is covered by the following requirements:

- The Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) established under the Therapeutic Goods Act (Commonwealth).

16. OTHER INFORMATION

Reason for issue: Format change

This information was prepared in good faith from the best information available at the time of issue. It is based on the present level of research and to this extent we believe it is accurate. However, no guarantee of accuracy is made or implied and since conditions of use are beyond our control, all information relevant to usage is offered without warranty. The manufacturer will not be held responsible for any unauthorised use of this information or for any modified or altered versions.

If you are an employer it is your duty to tell your employees, and any others that may be affected, of any hazards described in this sheet and of any precautions that should be taken.

Safety Data Sheets are updated frequently. Please ensure you have a current copy.