



MATERIAL SAFETY DATA SHEET

HYDROGEN PEROXIDE 20-60% AQUEOUS SOLUTION

SECTION 1 – IDENTIFICATION

Product Name **HYDROGEN PEROXIDE 20-60% AQUEOUS SOLUTION**

Recommended Use Oxygen Bleach

Supplier TASMAN CHEMICALS PTY LTD
ACN : 005 072 659
Street Address 1-7 Bell Grove, Braeside ,
Victoria 3195 AUSTRALIA

Telephone Number (03) 9587 6777
Facsimilie (03) 9587 5255
Email taschem@taschem.com.au
Website www.tasmanchemicals.com.au

Emergency Telephone Number 1 800 334 556

SECTION 2 – HAZARDS IDENTIFICATION

Hazardous according to criteria of Safe Work Australia.

Hazard Category : C (Corrosive) O (Oxidising)

Risk Phrases

R20/22 Harmful by inhalation and if swallowed
R34 Causes burns

Safety Phrases

S1/2 Keep locked up and out of the reach of children.
S3 Keep in a cool place
S28 After contact with skin, wash immediately with plenty of water
S36/39 Wear suitable protective clothing and eye/face protection
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

HSNO Hazard Classification 5.1.1B 6.1D 6.9B 8.2B 8.3A 9.1D 9.3C

Hydrogen Peroxide is classified as **Dangerous Good** according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

<u>Ingredient</u>	<u>CAS Number</u>	<u>Proportion (%m/m)</u>
WATER	7732-18-5	M
HYDROGEN PEROXIDE	7722-84-1	M

VH>60% H>30-60% M=10-30% L=<10%

SECTION 4 – FIRST AID MEASURES

Description of necessary measures according to routes of exposure.

- Swallowed** DO NOT induce vomiting. Danger of penetration of the lungs when swallowed or vomited, due to gas evolution and foam formation. Rinse mouth with water and give plenty of water to drink provided person is conscious and alert. Seek immediate medical attention.
- Eye** Immediately flush eyes with plenty of water holding eyelids open. Seek immediate medical treatment at an ophthalmologist.
- Skin** Remove contaminated clothing. Rinse affected area with plenty of water. Consult a physician.
- Inhaled** Remove victim from exposure to fresh air. If rapid recovery does not occur, call a physician immediately.

Advice to Doctor

Therapy as for chemical burn. Following inhalation : formation of a toxic lung oedema is possible if product continues to be inhaled despite acute irritative effect (e.g if it is not possible to leave the danger area). Prophylaxis of a toxic lung oedema with inhalative steroids (Dexamethasone aerosol dosing spray, f.ex.auxilosone). If substance has been swallowed; risk of gaseous embolisms! In case of excessive strain on the stomach due to gas evolution, inert siphon tube. Early endoscopy in order to assess mucosa lesions in the oesophagus and stomach which may appear. If necessary, such away left over substance. Do not administer activated charcoal, since risk of release of large amounts of gas from hydrogen peroxide.

Aggravated medical conditions caused by exposure

Individuals with pre-existing diseases of the skin, eye or lungs may have increased susceptibility to the toxicity of excessive exposures

SECTION 5 – FIRE FIGHTING MEASURES

Extinguishing Media - In case of fire, appropriate extinguishing media include water spray and carbon dioxide. Do not use extinguishing media for organic compounds.

Hazards from Combustion Products - Product is fire-stimulating. Contact with flammable substances may cause inflammation. The product itself does not burn. In the event of a fire, product may decompose yielding oxygen. Risk of over pressure and burst due to decomposition in confined spaces and pipes. Release of oxygen may support combustion. Avoid contact with incompatible materials such as impurities, decomposition catalysts, metals, metallic salts, alkalis, hydrochloric acid, reducing agents, flammable substances and organic solvents. Mixtures with organic materials (e.g solvents) can display explosive properties.

Special Protective Precautions and Equipment for Fire Fighters - Fire fighters should wear a self contained breathing apparatus and full protective clothing along with protective equipment.

Flammability Conditions - Product is a non-flammable liquid. Decomposition will release oxygen which will increase the explosive limits and burning rate of flammable vapours.

SECTION 6 – ACCIDENTALRELEASE MEASURES

Emergency Procedures - Personnel involved in the clean up should wear full protective clothing. Evacuate all unnecessary personnel. Eliminate all sources of ignition. Increase ventilation. Avoid walking through spilled product as it is corrosive and may be slippery. Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Authority. Isolate defective containers. Shut off leak if safe to do so. Place defective containers in waste receptacle made of plastic not metal. Do NOT seal defective containers of waste receptacles airtight (danger of bursting due to product decomposition).

Methods and Materials for Containment and Clean Up - To handle a small quantity of spilt product, dilute with copious amounts of water to <3%. Drain to an approved chemical sewer, waste treatment system or municipal sewer. In case of larger spill or where there is insufficient water available for dilution, contain the spill and leave to decompose naturally until <3% is reached.

SECTION 7 – HANDLING AND STORAGE

Precautions for Safe Handling - Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling.

Conditions for Safe Storage (Including Any Incompatibles) - Store in a cool, dry, well-ventilated area with jointless, concrete, acid-proof floor. Only use containers which are specially permitted for hydrogen peroxide. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Do not confine product in unvented vessels or between closed valves due to risk of overpressure and burst due to decomposition in confined spaces. Store away from incompatible materials including alkalis, reductants, metallic salts, flammable substances, organic solvents and sources of ignition. Take precautionary measures against static charges by bonding and grounding all equipment. This product has a UN classification of 2014 and a Dangerous Goods Class 5.1 (oxidizing).

Container Type - For transport, storage and tank installations, only use suitable materials which include 304L and 316L stainless steel, aluminium min. 99.5% passivated, aluminium magnesium alloys, passivated, polyethylene and polypropylene. Do NOT use iron, mild steel, copper, bronze, brass, tin and zinc.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

National Exposure Standards - Hydrogen Peroxide cas no: 7722-84-1 Exposure Standards: Worksafe TWA: 1.4mg/m³

Exposure Standards (TWA) is the time-Weighted average airborne concentration over an eight-hour working day, for a five day working week over an entire working life. According to current knowledge this concentration should neither impair the health or, cause undue discomfort to, nearly all workers.

Biological Limit Values - No information available on biological limits for this product.

Engineering Controls - A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Personal Protection - RESPIRATOR: If engineering controls are inadequate or open handling is unavoidable, wear an NIOSH approved respirator (ABEK2P3). EYES: Chemical splash goggles and full face shield. HANDS: Neoprene, butyl rubber or vinyl gloves. CLOTHING: Wear a neoprene or PVC acid-proof suit when appropriate to avoid exposure to peroxide and neoprene boots. Do NOT use leather boots as they can catch fire within minutes after contact with peroxide.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance	clear, colourless liquid	Vapour Density	Not applicable.
Odour	slightly pungent odour	Vapour Pressure	10mm Hg at 20°C
Melting Point	-52°C deg C	Boiling Point	114°C deg C
Specific Gravity	1196g/cm ³ (20°C) (Water = 1)	Solubility in Water	Miscible
pH	1 - 3		

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability Product is stable under directed conditions of use and storage. Product is very reactive. Product is a strong oxidizing agent. Commercial products are stabilized to reduce risk of decomposition due to contamination.

Conditions to Avoid - Avoid excessive heat, direct sunlight, static discharges and high temperatures.

Incompatible Materials - Incompatible with impurities, decomposition catalysts, metals, metallic salts, alkalis, hydrochloric acid, reducing agents, organic solvents and sources of ignition.

Hazardous Decomposition Products - Under conditions of thermal decomposition, product will emit steam and oxygen.

Hazardous Reactions - Product is a strong oxidizing agent. Product is very reactive. Danger of decomposition if exposed to heat. When coming in contact with the product, impurities, decomposition catalysts, metallic salts, alkalis and reducing agents may lead to self-accelerated, exothermic decomposition and the formation of oxygen. Risk of overpressure and burst due to decomposition in confined spaces. Release of oxygen may support combustion. Mixtures with organic materials (solvents) can display explosive properties.

SECTION 11 – TOXOLOGICAL INFORMATION

Toxicity Data - Oral LD50 Rat: 805mg/Kg (OECD Test Guideline 401) Oral LD50 Rat: 1193mg/Kg (Literature) Hydrogen Peroxide 35% as test substance. Oral LD50 Rat: 801mg/Kg (Literature) Hydrogen Peroxide 60% as test substance. Inhale LC50 Rat: >0.17mg/L (Literature) Hydrogen Peroxide 50% as test substance Skin LD50 Rabbit: >6500mg/Kg (Literature) Skin Irritation Rabbit: Strong corrosive (Literature) Eye Irritation Rabbit: Corrosive (Literature) Repeated Dose Toxicity: Mouse 90d changes of parameters of the blood, body weight development negative, irritive effect on gastro-intestinal tract (OECD) Genetoxicity in Vitro: microorganisms, cell cultures - no mutagenic effects. Genotoxicity in Vivo: micronucleus test mouse intraperitoneal - negative. Carcinogenicity: Hydrogen Peroxide is not a carcinogenic substance according to MAK, IARC, NTP, OSHA and ACGIH.

Health Effects - Acute

Swallowed - Swallowing can lead to bleeding of the mucosa in the mouth, oesophagus and stomach. The rapid releasing of oxygen can cause distension and bleeding of the mucosa in the stomach and lead to severe damage of the internal organs, especially in the event of greater intake of the product.

Eye - Extreme irritation up to cauterisation. Can cause severe conjunctivitis, cornea damage or irreversible eye damage. Symptoms may occur with delay

Skin - Causes caustic burns. With increasing contact length, local erythema or extreme irritation (whitening) up to blistering (caustic burn) can occur.

Inhaled - Inhalation of vapour/aerosols can lead to irritation of the respiratory tract Symptoms may occur with delay after any exposure.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity - No data available.

Persistence and Degardability - 50% degradation within approx. 20 hours: medium: air. The product can be degraded by abiotic (chemical or photolytic) processes. Under ambient conditions, quick hydrolysis, reduction of decomposition occurs.

Mobility - No information available on mobility for this product.

Environmental Fate (Exposure) - Avoid contaminating drains, sewers or waterways.

Bioaccumulative Potential - None. Hydrogen peroxide quickly decomposes to oxygen and water.

SECTION 13 – DISPOSAL CONSIDERATIONS

Disposal - Dispose of in accordance with all local, state, and federal regulations.

Special Precautions for Land Fill or Incineration - This should be done in accordance with the Hazardous Substances (Disposal) Regulations 2001.

SECTION 14 – TRANSPORT INFORMATION

UN Number 2014

Shipping Name HYDROGEN PEROXIDE, AQUEOUS SOLUTIONS, 20-60% HYDROGEN PEROXIDE

Dangerous Goods Class 5.1

Subsidiary Risk 8

Pack Group II

Precaution for User OXIDIZING CORROSIVE

Hazchem Code 2P

SECTION 15 – REGULATORY INFORMATION

Classification Based upon information, classified as hazardous according to criteria of Safe Work Australia

Poisons Schedule Schedule 6

SECTION 16 – OTHER INFORMATION

Contact Points

<u>Organisation</u>	<u>Location</u>	<u>Telephone</u>	<u>Ask For</u>
Tasman Chemicals Pty Ltd	Braeside, Victoria, Australia	(03) 9587 6777	Technical Manager
Poisons Information Centre		13 1126	

MSDS are updated frequently. Please ensure that you have a current copy.

This MSDS summarises our best knowledge of the health and safety hazard information of the product; how to safely handle and use the product in the workplace. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact Tasman Chemicals Pty Ltd. Our responsibility for products sold are subject to our standard terms and conditions, a copy of which appears on all invoices. It is also available on request. Where health or safety data given discloses a risk to the user or environment, it is the responsibility of the Purchaser to pass on that information to employees or those who may be using the product, ensuring that adequate safety procedures are used including good industrial hygiene.