Safety Data Sheet HYDROGEN PEROXIDE 50 - <70%

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SECTION 1: Identification

GHS Product identifier

Product name	HYDROGEN PEROXIDE 50 - <70%

Other means of identification

Product	Product Code
Hydrogen Peroxide 50% w/w	0868/
Hydrogen Peroxide 50% w/w	4609/
Hydrogen Peroxide 50% Cosmetic Grade	HF003
Hydrogen Peroxide 50% Cosmetic Grade	HP003
Hydrogen Peroxide 50% Food Grade	HP238
Hydrogen Peroxide 50% TG	HT003

Recommended use of the chemical and restrictions on use

Bleaching and deodorizing of wood pulp, textiles, hair and fur; source of organic and inorganic peroxides; pulp and paper industry; plasticizers; foam rubber; manufacture of glycerol; antichlor; dyeing; electroplating; antiseptic; epoxidation, hydroxylation, oxidation and reduction; viscosity control for starch and cellulose derivatives; refining and cleaning metals; bleaching and oxidizing agent in foods; seed disinfectant; neutralising agent in wine distillation; substitute for chlorine in water and sewage treatment; and laboratory reagent.

Supplier's details

Name	ChemSupply Australia Pty Ltd
Address	38-50 Bedford Street 5013 Gillman South Australia Australia
Telephone	08 8440 2000
email	www.chemsupply.com.au

Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

SECTION 2: Hazard identification

General hazard statement

Classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

Classified as Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Acute toxicity, inhalation, Cat. 4
- Acute toxicity, oral, Cat. 4
- Serious eye damage/eye irritation, Cat. 1
- Skin corrosion/irritation, Cat. 1A
- Specific target organ toxicity following single exposure, Cat. 3
- Oxidizing liquids, Cat. 2

GHS label elements, including precautionary statements

Pictograms

Signal word	**Danger**

Hazard statement(s)

H272	May intensify fire; oxidizer
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H332	Harmful if inhaled
H335	May cause respiratory irritation

Precautionary statement(s)

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220	Keep away from clothing and other combustible materials.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep 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/doctor/physcian
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use agents recommended in Section 5 of SDS for extinction
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container to an approved waste disposal facility

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight	34.0122

Component	Identification	Weight %	Classifications
Hydrogen peroxide	CAS no.: 7722-84-1 EC no.: 231-765-0 Index no.: 008-003-00-9	50 - 70 %	CLASSIFICATIONS: Acute toxicity, inhalation, Cat. 4; Acute toxicity, oral, Cat. 4; Oxidizing liquids, Cat. 1; Skin corrosion/irritation, Cat. 1A. HAZARDS: H271 - May cause fire or

Component	Identification	Weight %	Classifications
			explosion; strong oxidizer; H302 - Harmful if swallowed; H314 - Causes severe skin burns and eye damage; H332 - Harmful if inhaled. [SCLs/M-factors/ATEs]: Ox. Liq. 1; H271: C ≥ 70 %****; Ox. Liq. 2; H272: 50 % ≤ C < 70 % ****; *; Skin Corr. 1A; H314: C ≥ 70 %; Skin Corr. 1B; H314: 50 % ≤ C < 70 %; Skin Irrit. 2; H315: 35 % ≤ C < 50 %; Eye Dam. 1; H318: 8 % ≤ C < 50 %; Eye Irrit. 2; H319: 5 % ≤ C < 8 %; STOT SE 3; H335; C ≥ 35 %
Water	CAS no.: 7732-18-5 EC no.: 231-791-2	30 - 50 %	CLASSIFICATIONS: No data available. HAZARDS: No data available.

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	First Aid Facilities: Maintain eyewash fountain and drench facilities in work area. Advice to Doctor: Treat symptomatically and supportively. Attempts at evacuating the stomach via emesis induction or gastric lavage should be avoided. In the event of severe distension of the stomach or esophagus due to gas formation, insertion of a gastric tube may be required. To treat corneal damage, careful ophthalmologic evaluation is recommended and the possibility of local corticosteroid therapy should be considered. Monitor for respiratory tract irritation and hypoxia after severe inhalation exposure.
If inhaled	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Immediately medical attention is required.
In case of skin contact	Immediately remove contaminated clothing and wash affected area with water for at least 15 minutes. Ensure contaminated clothing is washed before re-use. Seek medical advice /attention depending on the severity.
In case of eye contact	If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Seek immediate medical assistance.
If swallowed	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek immediate medical advice.

Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically and supportively. Attempts at evacuating the stomach via emesis induction or gastric lavage should be avoided. In the event of severe distension of the stomach or esophagus due to gas formation, insertion of a gastric tube may be required. To treat corneal damage, careful ophthalmologic evaluation is recommended and the possibility of local corticosteroid therapy should be considered. Monitor for respiratory tract irritation and hypoxia after severe inhalation exposure.

For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126;
New Zealand 0800 764 766) or a doctor at once.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Small fire: USE FLOODING QUANTITIES OF WATER. Do not use dry chemicals, CO2 or foam. If safe to do so, move undamaged containers from fire area. Do not move cargo if cargo has been exposed to heat.
Large fire: Flood fire area with water from a protected position. Cool containers with flooding quantities of water until well after fire is out - If impossible, withdraw from area and let fire burn. Avoid getting water inside containers: a violent reaction may occur. Dam fire control water for later disposal.

Specific hazards arising from the chemical

Hazards from Combustion Products: Molecular oxygen, which can accelerate the burning of flammable materials or cause spontaneous combustion.

Will accelerate burning when involved in a fire. May explode from heating, shock, friction or contamination. Some will react explosively with hydrocarbons (fuels). May ignite combustibles (wood, paper, clothing, etc). Fire may produce irritating, poisonous, and/or corrosive gases. Containers may explode when heated. Runoff may create fire or explosion hazard.

Special protective actions for fire-fighters

Wear SCBA and chemical splash suit. Structural firefighter's uniform will provide limited protection.

Further information

Concentrations of 27.5% up to 52% will cause a moderate increase in the burning rate or cause spontaneous ignition of combustible materials with which it comes in contact. Concentrations of 35% and above can cause combustible materials such as wood, paper, oils and grease to burst into flames and will support, accelerate and intensify the burning of combustible materials. Large amounts of oxygen gas may be released to form an oxygen-rich atmosphere.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid inhalation, contact with skin, eyes and clothing. Evacuate the area of all non-essential personnel.
Use personal protective equipment listed in Section 8.

Methods and materials for containment and cleaning up

Do not contaminate. Keep combustibles (wood, paper, clothing, oil, etc.) away from spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use water spray to knock down vapours or divert vapour clouds. Prevent entry into waterways, drains or confined areas. Prevent exposure to heat.

Small Liquid Spill - Use a non-combustible material like vermiculite, sand or earth to soak up the product and place in a loosely-covered container for later disposal.
Large Liquid Spill - SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.

SECTION 7: Handling and storage

Precautions for safe handling

Avoid contact with eyes, skin, and clothing. Keep container locked up and tightly sealed. Contents may develop pressure upon prolonged storage. Open carefully. Loosen caps slowly to release any pressure. Ensure good ventilation at the workplace. n case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Wash thoroughly after handling. Keep away from heat, welding and all sources of ignition, even when empty. This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Substance/product can reduce the ignition temperature of flammable substances. Keep combustible materials away from the area, maintain all equipment in a thoroughly clean condition. Do not use metal equipment or containers. Containers and equipment used to handle the product should be used exclusively for that product. Handling systems must exclude fittings of iron, brass, copper, Monel, and screwed joints caulked with red lead. Rinse empty drums and containers thoroughly with water before discarding.

Conditions for safe storage, including any incompatibilities

Store in tightly closed, light-resistant, vented containers, in a dark, cool, dry, well-ventilated area, away from incompatible materials such as combustible substances, reducing agents, strong bases, acids, organics, foodstuffs flammable substances, metals, and oxidizable materials. Use adequate venting devices on all packages, containers and tanks to permit release of internal pressure. Protect from physical damage, direct sunlight, moisture and contamination.

Corrosiveness: Corrosivity to Metals: Hydrogen peroxide solutions (35% and greater) are corrosive (corrosion rate greater than 1.27 mm/year) to carbon steel (types 1010 and 1020 (35-100%); 1075, 1095 and 12L14 (100%), grey cast iron, 3% nickel cast iron, ductile cast iron, the nickel base alloys, Hastelloy B and D and Monel, copper, nickel-copper alloy, brass, cartridge brass, bronze, aluminium bronze, naval bronze, silicon bronze, and lead at room temperature. Hydrogen peroxide solutions attack types 1010 and 1020 carbon steel at any concentration and temperature. One source reports that 50-90% hydrogen peroxide is corrosive to type 3003 aluminium.
Hydrogen peroxide solutions (35% and greater) are not corrosive (corrosion rate less than 0.5 mm/year) to stainless steel (e.g. types 303, 304, 316, 17-4PH, 400 series, Carpenter 20Cb-3), aluminium (99.5%), certain aluminium alloys (types 1060, 5052, 6063 and aluminium-magnesium alloys), nickel (100% solution), the nickel-base alloys, Hastelloy C and Inconel, tantalum, titanium and zirconium. Both stainless steel and aluminium surfaces must be passivated (formation of a protective film by chemical treatment) before use.
May attack or ignite some forms of plastics, rubber, or coatings.

[7Z] Recommended Materials: Aluminium 99.5 %; stainless steel 304L/316L; glass; approved grades of HDPE.

SECTION 8: Exposure controls/personal protection

Control parameters

CAS: 7722-84-1
Hydrogen peroxide
AU/SWA (Australia): 1 ppm; 1.4 mg/m3 TWA inhalation

Appropriate engineering controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection

Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Body protection

Footwear: Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.

Body Protection: Clean clothing or protective clothing should be worn, preferably with and apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Respiratory protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/ mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to Australian Standards AS/ NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/ NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance, such as physical state and colour	Clear, colourless liquid.
Colour	No data available.
Odour	Odourless to slightly acrid odour, resembling that of ozone.
Odour threshold	No data available.
Melting point and freezing point	-14.6 °C (20%); -25.7 °C (30%); -33 °C (35%); -41 °C (40 %); -52.2 °C (50%).
Boiling point or initial boiling point and boiling range	103.6 °C (20%); 106.2 °C (30%); 108 °C at 1013 hPa (decomposes) (35 %); 110 °C (40 %); 114 °C at 1013 hPa (decomposes) (50%).
Flammability	No data available.
Lower and upper explosion limit or lower and upper flammability limit	No data available.
Flash point	No data available.
Explosive properties	Explosive decomposition may occur under fire conditions. Contact with combustible materials may cause explosion. Can react violently or explosively with many chemicals. Some substances that do not normally burn in air will explode upon contact with hydrogen peroxide. May form explosive peroxides. Closed containers may rupture violently due to rapid decomposition, if exposed to fire or excessive heat for a sufficient period of time, or if contaminated with certain metals or dirt.
Auto-ignition temperature	No data available.
Decomposition temperature	>= 60 °C (Self-Accelerating decomposition temperature (SADT) (> 50%)); < 60 °C (slow decomposition) (> 50%); I00 °C in 25 kg package (SADT (35%)); 80 °C in I m^3 volume (SADT (35%)).
Oxidising properties	No data available.
pH	3.3 (30 %); 4.6 (35 %), 4.3 (50 %) (Note: The pH of commercial solutions can be affected by the type and amount of stabilizers added, and many times the pH is purposely adjusted to a grade specification range).
Kinematic viscosity	Kinematic Viscosity: 0.98 mm^2/s (0.98 centistokes) at 20 °C (35% or 50%). [88] Dynamic Viscosity: 1.11 mPa.s (1.11 centipoise) (35%); 1.17 mPa.s at 20 °C (50%).
Solubility	Solubility in Water: Miscible in all proportions. Solubility in Organic Solvents: Soluble in all proportions in many polar solvents, e.g. low molecular weight alcohols, glycols and ketones; insoluble in petroleum ether (>20%). (Note: Concentrated hydrogen peroxide solutions can react explosively with these solvents.) Soluble in diethyl ether (>50%).

Partition coefficient — n-octanol/ water (logarithmic value)	Log P(oct) = -0.70 to -1.33 (estimated); - 1.1 (30%).
Vapour pressure	Partial vapour pressure = ca. 0.48 hPa at 30 °C (H202), Total vapour pressure = 30.70 hPa (water + H202) (35 %); Partial vapour pressure = ca. 0.99 hPa at 30 °C (H202), Total vapour pressure = 24.00 hPa (water + H202) (50 %).
Evaporation rate	No data available.
Density and relative density	Specific Gravity: 1.07 @ 20 ºC/4 ºC (20%); 1.11 @ 20 ºC/4 ºC (31%); 1.132 at 20 °C (35 %); 1.15 (40 %); 1.195 at 20 °C (50 %).
Relative vapour density	1.17 (30 %); 1 (50 %).
Particle characteristics	No data available.

Supplemental information regarding physical hazard classes
Surface Tension: 75.6 mN/m (75.6 dynes/cm) at 20 °C (50%).

Further safety characteristics (supplemental)
Saturated Vapour Concentration: 500 ppm at 30 °C (35%); 500 ppm (50%).

Other Information: Conversion Factor: 1 ppm = 1.39 mg/m^3; 1 mg/m^3 = 0.72 ppm at 25 °C (calculated) (20-35%).
Critical Temperature: 457 °C (100%).
Critical Pressure: 20990 kPa (207 atm.) (100%).
Dipole moment: 2.26 D.
Acidity: Weak acid; pKa = 11.75 at 20 °C (Ka = 1.78 x 10(-12) at 20 °C) (>20 %).
Taste: Slight acid. Bitter.
Dissociation Constants: pKa = 11.75.
Henry's Law = 7.04 x 10-9 atm m^3/mol @ 25 °C.
Index of refraction: 1.4061 @ 28 °C.

SECTION 10: Stability and reactivity

Reactivity
Reacts with incompatible materials

Chemical stability
Stable under recommended storage conditions. It may contain a stabilizer; product usually stabilized by addition of acetanilide or similar organic materials. Solutions of hydrogen peroxide gradually deteriorate, even when stabilized (relatively stable sample of hydrogen peroxide typically decomposes at the rate of about 0.5%/year at room temperature) to release molecular oxygen, water and heat. Unstable upon standing or upon repeated agitation, undergoes accelerated decomposition when exposed to light or when in contact with rough surfaces, many oxidizing or reducing substances or contaminated with heavy metals, rust, or dirt, and decomposes suddenly with alkalies, finely divided metals or when heated. Stability is reduced when pH is above 4.0 (the optimum pH is 3.5-4.5); the presence mineral acids of renders it more stable.

Possibility of hazardous reactions
Hydrogen peroxide solutions (30% or greater) are strong oxidizing agents capable of reacting explosively with many substances. The degree of hazard associated with hydrogen peroxide depends on concentration. Some organic compounds react with hydrogen peroxide to form unstable peroxides. Contact with combustible materials (e.g. wood, paper, textiles, oil, grease) may cause spontaneous fire or explosion. Drying of concentrated hydrogen peroxide on clothing or other combustible materials may cause fire. Reaction with strong bases (e.g. potassium hydroxide or sodium hydroxide) may be violently explosive. Mixtures with 35% and above hydrogen peroxide with nitric acid (more than 50%) or sulfuric acid can explode violently. Contact with organic compounds (e.g. carboxylic acids and anhydrides, nitrogen-containing bases, aldehydes, ketones, ethers, alcohols, charcoal, organic dust) may result in spontaneous combustion, violent decomposition and/or explosion. Contact with metals (powdered or metal surfaces), metal oxides, metal sulfides, metal salts, or iodates may cause violent decomposition. Reaction with reducing agents (e.g. metal hydrides) may be violent. May attack or ignite some forms of plastics, rubber, or coatings. Very concentrated hydrogen peroxide may react explosively

when in contact with potassium permanganate. Soluble fuels (acetone, ethanol, glycerol) will detonate on admixture with peroxide of over 30% concentration, the violence increasing with concentration.

Conditions to avoid

Organic materials plus mechanical shock, light, ignition sources, dust generation, heat, combustible materials, reducing agents, alkaline materials, strong oxidants, rust, dust, pH > 4.0, contamination, depletion of stabilizers, lack of vents and incompatible materials.

Incompatible materials

Nitric acid (more than 50%) or sulfuric acid, strong bases (e.g potassium hydroxide or sodium hydroxide), metals (powdered or metal surfaces, e.g. osmium, palladium, platinum, iridium, gold, silver, manganese, cobalt, copper, lead, potassium, sodium, lithium, iron, brass, bronze, chromium, zinc, nickel, magnesium), metal oxides (e.g. cobalt oxide, iron oxide, lead oxide, lead hydroxide, manganese oxide), metal sulfides, metal salts (e.g. calcium permanganate, salts of iron, copper, chromium, vanadium, tungsten, molybdeum, and platinum), or iodates, reducing agents (e.g. metal hydrides), organic materials (e.g. carboxylic acids and anhydrides, nitrogen-containing bases, aldehydes, ketones, ethers (dioxane, furfuran, tetrahydrofuran), soluble fuels (acetone, alcohol, glycerol), charcoal, organic dust), flammable materials, combustible materials (e.g. wood, paper, cellulose, textiles, oil, grease), strong oxidizing agents (e.g. potassium permanganate), hydrazine, sodium carbonate, cyanides (e.g. potassium cyanide, sodium cyanide), urea, triethylamine, sodium borate, aniline, cyclopentadiene, glycerine, asbestos, mercurous chloride, sodium pyrophosphate, hexavalent chromium compounds, sodium fluoride, chlorosulfonic acid, hydrogen selenide, some forms of plastics, rubber, or coatings.

Hazardous decomposition products

Oxygen, the release of other hazardous decomposition products is possible, hydrogen gas, water, heat, steam. Decomposition continuously occurs even at a slow rate when the compound is inhibited.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Ingestion: Harmful if swallowed. Ingestion of concentrated solutions (greater than 20%) causes irritation of the gastrointestinal and respiratory tract, with sharp pains in the abdominal pain, nausea, vomiting, hypermotility and diarrhoea, and may cause corrosive injury to the mouth and throat, difficulty in swallowing, foaming at the mouth, oedema (bleeding) of the throat with obstruction of air passages, stomach distension (due to rapid liberation of oxygen), and perforation of the oesophagus and stomach, with bleeding of the stomach and ulcer formation, belching, peritonitis, convulsions, pulmonary oedema, coma, spastic paralysis with or without sensory change, haemorrhage and damage to the red blood cells, temporary unconsciousness and fever, possible cerebral swelling (fluid on the brain), and death. Ingestion is not a typical route of occupational exposure.

Inhalation: Hydrogen peroxide does not readily form a vapour at room temperature. If heated or misted, inhalation of vapours or mist is highly irritating to the nose, throat, lungs, and respiratory tract, and may burn the mucous membrane of the nose and throat, causing ulceration of nasal tissue, and respiratory effects such as throat pain, inflammation, lacrimation, coughing, wheezing, laryngitis, shortness of breath, nausea and vomiting. May affect behaviour/central nervous system (insomnia, headache, ataxia, nervous tremors with numb extremities) and blood (cyanosis) and cause chemical pneumonia. In severe cases, respiratory effects may include acute lung damage, bronchitis, delayed pulmonary oedema (fluid in lungs), unconsciousness and death.

Skin corrosion/irritation

Solutions of 50% are severely irritating and corrosive respectively, based on animal information. Corrosive materials are capable of producing severe burns, blisters, ulcers and permanent scarring, depending on the concentration of the solution and the duration of contact. May cause discolouration, erythema (redness), swelling of tissue, and pain. Transient whitening or bleaching of the skin has been observed in humans following contact with dilute solutions. Solutions over 30% may easily cause papules and vesicles (blisters). A limited human study showed a severe reaction to 35% that healed completely. Prolonged contact (e.g. 24-hours) can cause moderate to severe irritation and possible moderate to severe burns. Non-permeator into skin.

Serious eye damage/irritation

Contact with solutions of 20% and greater is irritating and corrosive to eyes, based on animal information. Can cause severe eye burns, and permanent eye lesions, including corneal damage and blindness, depending on the concentration of the solutions and duration of contact. Symptoms include pain, redness, blurred vision, superficial clouding, lacrimation, swelling of the eyelids and corneal oedema. Vapour may cause irritation. No human information was located for hydrogen peroxide solutions of 20% and greater.

Respiratory or skin sensitization

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Hydrogen peroxide [7722-84-1] is evaluated in the IARC Monographs (Vol. 36, Suppl. 7, Vol. 71; 1999) as Group 3: Not classifiable as to carcinogenicity to humans.

Reproductive toxicity

Not classified based on available information.

Specific target organ toxicity (STOT) - single exposure

May cause respiratory irritation.

Specific target organ toxicity (STOT) - repeated exposure

Not classified based on available information.

Aspiration hazard

Not classified based on available information.

Additional information

Chronic Effects: Repeated or prolonged exposure to spray mist may produce throat and respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated or prolonged exposure may produce sore throat, and nose bleeds. Prolonged ingestion causes damage to the gastrointestinal tract. May cause damage to the central nervous system (CNS), and blood. Repeated use of hydrogen peroxide topical solution as a mouthwash or gargle may produce a condition known as <qt>hairy tongue<qt> or may cause irritation of the buccal mucous membrane. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Prolonged or repeated skin contact may cause dermatitis. Prolonged or intense skin contact or splashes in the eyes may cause corneal damage and severe injury. Chronic exposure to vapour produces eye irritation and gradual bleaching of their hair.

SECTION 12: Ecological information

Toxicity

Ecotoxicity: Toxic for aquatic organisms. In high concentrations: Toxic effect on fish and plankton.

Other Precautions: Wear protective clothing made of chloroprene rubber, polyvinyl chloride, polyethylene etc. Keep combustible materials away from the area, maintain all equipment in a thoroughly clean condition. To avoid contamination do not return any unused peroxide to the container. Keep away from glycerin, hydrazine, alcohol, carbon, oil and resins

Acute Toxicity - Fish: C. carpio LC50: 42 mg/l /48 h;
Pimephales promelas, LC50: 16.4 mg/l /96 h.

Acute Toxicity - Daphnia: Daphnia magna EC50: 7.7 mg/l /24 h.

Acute Toxicity - Algae: Chlorella vulgaris IC50: 2.5 mg/l /72 h.

Acute Toxicity - Other Organisms: Crustaceans, EC50: 2.4 mg/l /48 h.

Persistence and degradability

Readily biodegradable. Decomposition products: water and oxygen.
Abiotic degradation:
- Air, indirect photo-oxidation, t 1/2 from 16 - 20 h, sensitizer: OH radicals;
- water, redox reaction, t 1/2 from 25 - 100 h, mineral and enzymatic catalysis, fresh water;
- water, redox reaction, t l/2 from 50 - 70 h, mineral and enzymatic catalysis, salt water;
- Soil, redox reaction, t l/2 from 0.05 - 15 h, mineral catalysis.

Biodegradation:

- aerobic, t I/2 < 2 min, biological treatment sludge, Remarks: Readily biodegradable;
- aerobic, t I/2 from 0.3 - 5 d, fresh water, Remarks: Readily biodegradable;
- anaerobic, Remarks: not applicable.

Bioaccumulative potential
H202 does not accumulate in cells of living organisms.

Mobility in soil
- Air, Volatility, Henry's law constant (H) = 1 Pa.m^3/mol @ 20 °C, Remarks: not significant.
- Air, condensation on contact with water droplets, Remarks. rain washout;
- water, Remarks: The product evaporates slowly;
- Soil/sediments, Remarks: non-significant evaporation and adsorption.

SECTION 13: Disposal considerations

Disposal methods

Product disposal
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Sewage disposal
H202 does not accumulate in cells of living organisms.

Other disposal recommendations
Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

ADG (Road and Rail)
UN Number: 2014
Class: 5.1, 8
Packing Group: II
Proper Shipping Name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION

Environmental Hazards: Toxic for aquatic organisms. In high concentrations: Toxic effect on fish and plankton. No ecological problems, or impairments in the function of waste- water-treatment plants are to be expected when the product is handled and used with due care and attention.

Hazchem emergency action code (EAC)
2P

IMDG
UN Number: 2014
Class: 5.1, 8
Packing Group: II
EMS Number:
Proper Shipping Name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION

IATA
UN Number: 2014
Class: 5.1, 8
Packing Group: II
Proper Shipping Name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Australia SUSMP

Poison Schedule: S6

SECTION 16: Other information

Further information/disclaimer

ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

Preparation information

All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However,since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. ChemSupply Australia Pty Ltd accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives.

Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'
Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.
Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.
Safe Work Australia, Workplace Exposure Standards for Airbourne Contaminants, December 2019
Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au
IATA, Dangerous Goods Regulations (DGR)
IMO, International Maritime Dangerous Goods Code (IMDG)