HYDROGEN PEROXIDE 50%

Material Safety Data Sheet
Issue Date: 02-Sep-2014

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
HYDROGEN PEROXIDE 50%

STATEMENT OF HAZARDOUS NATURE
Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation.

PROPER SHIPPING NAME
HYDROGEN PEROXIDE, AQUEOUS SOLUTION

PRODUCT USE
Liquid oxygen bleach for laundries. Dose rate of 80ml per 100kg of dry weight weight wash is recommended.

SUPPLIER

Company: Jasol
Address:
105 Rutherford Street
Christchurch,
New Zealand
Telephone: +64 3 384 4433
Emergency Tel: 0800 243 622
Fax: +64 3 384 4431
Email: jasolnzorders@gwf.com.au

Company: Jasol
Address:
81 Leonard Road
Penrose
Auckland,
New Zealand
Telephone: +64 9 580 2105
Emergency Tel: 0800 243 622
Fax: +64 9 580 2136

Section 2 - HAZARDS IDENTIFICATION

GHS Classification

Acute Aquatic Hazard Category 3
Acute Toxicity (Inhalation) Category 3
Acute Toxicity (Oral) Category 4
Metal Corrosion Category 1
Oxidizing Liquid Category 2
Serious Eye Damage Category 1
Skin Corrosion/Irritation Category 1C

EMERGENCY OVERVIEW

HAZARD
DANGER
Determined using GHS/HSNO criteria:
5.1.1B 6.1C 6.1D 8.1A 8.2C 8.3A 9.3C 9.1C
May intensify fire; oxidizer
Toxic if inhaled
Harmful if swallowed
May be corrosive to metals
Causes severe skin burns and eye damage
Causes serious eye damage
Harmful to terrestrial vertebrates
Harmful to aquatic life

PRECAUTIONARY STATEMENTS

Prevention
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep/Store away from clothing and other combustible materials.

Take any precaution to avoid mixing with combustibles.
Keep only in original container.
Do not breathe dust/fume/gas/mist/vapours/spray.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.

Response
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
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 CENTER or doctor/physician.
Call a POISON CENTER or doctor/physician.
Rinse mouth.
Wash contaminated clothing before reuse.
Absorb spillage to prevent material damage.

Storage
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Store in corrosive resistant container or with a resistant inner liner.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
hydrogen peroxide	7722-84-1	50
water	7732-18-5	50

Section 4 - FIRST AID MEASURES

NEW ZEALAND POISONS INFORMATION CENTRE 0800 POISON (0800 764 766)
NZ EMERGENCY SERVICES: 111

SWALLOWED
• For advice, contact a Poisons Information Centre or a doctor at once.
• Urgent hospital treatment is likely to be needed.
• 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 airway and prevent aspiration.

EYE
■ If this product comes in contact with the eyes:
• Immediately hold eyelids apart and flush the eye continuously with running water.
• Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
• Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
• Transport to hospital or doctor without delay.

SKIN
■ If skin or hair contact occurs:
• Immediately flush body and clothes with large amounts of water, using safety shower if available.
• Quickly remove all contaminated clothing, including footwear.
• Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.
• Transport to hospital, or doctor.

INHALED
• 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.
• Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema.
• Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs).
• As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested.
• Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered.

NOTES TO PHYSICIAN
■ Treat symptomatically.
Hydrogen peroxide at moderate concentrations (5% or more) is a strong oxidant.
• Direct contact with the eye is likely to cause corneal damage especially if not washed immediately. Careful ophthalmologic evaluation is recommended and the possibility of local corticosteroid therapy should be considered.

• Because of the likelihood of systemic effects attempts at evacuating the stomach via emesis induction or gastric lavage should be avoided.
• There is remote possibility, however, that a nasogastric or orogastric tube may be required for the reduction of severe distension due to gas formation"
Fisher Scientific MSDS.
Depending on the degree of exposure, periodic medical examination is indicated. The symptoms of lung oedema often do not manifest until a few hours have passed and they are aggravated by physical effort.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
■ For hydrogen peroxide
NOTE: Chemical extinguishing agents may accelerate decomposition. [CCINFO].
• DO NOT use halogenated fire extinguishing agents.
FOR SMALL FIRE:
• USE FLOODING QUANTITIES OF WATER.
• DO NOT use dry chemical, CO2, foam or halogenated-type extinguishers.
FOR LARGE FIRE
• Flood fire area with water from a protected position.

FIRE/EXPLOSION HAZARD
• Will not burn but increases intensity of fire.
• Heating may cause expansion or decomposition leading to violent rupture of containers.
• Heat affected containers remain hazardous.
• Contact with combustibles such as wood, paper, oil or finely divided metal may produce spontaneous combustion or violent decomposition.

FIRE INCOMPATIBILITY
• Avoid storage with reducing agents.
• Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous.

PERSONAL PROTECTION

Glasses:	Gloves:	Respirator:
Full face- shield.	PVC chemical resistant type.	Type B- P Filter of sufficient capacity

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS
• Clean up all spills immediately.
• No smoking, naked lights, ignition sources.
• Avoid all contact with any organic matter including fuel, solvents, sawdust, paper or cloth and other incompatible materials, as ignition may result.
• Avoid breathing dust or vapours and all contact with skin and eyes.
Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING
• DO NOT allow clothing wet with material to stay in contact with skin.
• Avoid personal contact and inhalation of dust, mist or vapours.
• Provide adequate ventilation.
• Always wear protective equipment and wash off any spillage from clothing.
• Keep material away from light, heat, flammables or combustibles.

SUITABLE CONTAINER
• Glass container is suitable for laboratory quantities.
• DO NOT use mild steel or galvanised containers.
• DO NOT repack. Use containers supplied by manufacturer only.
For low viscosity materials
• Drums and jerricans must be of the non-removable head type.
• Where a can is to be used as an inner package, the can must have a screwed enclosure. <</>.
Hydrogen peroxide containing/ generating materials requiring rigid packaging.
Store in:
• containers with vented lids.
• properly passivated aluminium containers.
• properly passivated stainless steel.
• polyethylene containers.

STORAGE REQUIREMENTS
• Store in original containers.
• Keep containers securely sealed as supplied.
• Store in a cool, well ventilated area.
• Keep dry.

In addition, Goods of Class 5.1, packing group II should be:
• stored in piles so that
• the height of the pile does not exceed 1 metre
• the maximum quantity in a pile or building does not exceed 1000 tonnes unless the area is provided with automatic fire extinguishers
• the maximum height of a pile does not exceed 3 metres where the room is provided with automatic fire extinguishers or 2 meters if not.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m³	Notes
New Zealand Workplace Exposure Standards (WES)	hydrogen peroxide (Hydrogen peroxide)	1	1.4	A3 CARCINOGEN

The following materials had no OELs on our records
• water: CAS:7732- 18- 5

PERSONAL PROTECTION

RESPIRATOR
Type B-P Filter of sufficient capacity

EYE
• Chemical goggles.
• Full face shield may be required for supplementary but never for primary protection of eyes
• Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET
• Wear chemical protective gloves, eg. PVC.
• Wear safety footwear or safety gumboots, eg. Rubber.
• When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.
Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:
• frequency and duration of contact,
• chemical resistance of glove material,
• glove thickness and
• dexterity.
• Leather wear not recommended: Contaminated leather footwear, watch bands, should be destroyed, i.e. burnt, as they cannot be adequately decontaminated.
• Where hydrogen peroxide exposure may occur do NOT wear PVA gloves.
• DO NOT use leather or cotton gloves, leather shoes as spill may cause fire.
• Care: Effects may be delayed.
• Hand cream offers no protection for hydrogen peroxide and should not be used.

OTHER
• 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 footwear.

ENGINEERING CONTROLS
■ General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circumstances.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE
Clear, colourless, water-like liquid with a slightly sharp odour; mixes with water.

PHYSICAL PROPERTIES
Liquid.
Mixes with water.
Corrosive.

State	Liquid	Molecular Weight	Not applicable.

Melting Range (℃)	- 52	Viscosity	Not Available
Boiling Range (℃)	114	Solubility in water (g/L)	Miscible
Flash Point (℃)	Not applicable	pH (1% solution)	Not available.
Decomposition Temp (℃)	Not Available	pH (as supplied)	0.3- 0.7
Auto-ignition Temp (℃)	Not applicable	Vapour Pressure (kPa)	Not Available
Upper Explosive Limit (%)	Not applicable	Specific Gravity (water=1)	1.20
Lower Explosive Limit (%)	Not applicable	Relative Vapour Density (air=1)	Not applicable.
Volatile Component (%vol)	Not available.	Evaporation Rate	Not Available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY
• Presence of incompatible materials.
• Product is considered stable under normal handling conditions.
• Prolonged exposure to heat.
• Hazardous polymerisation will not occur.
Solutions of hydrogen peroxide slowly decompose, releasing oxygen, and so are often stabilised by the addition of acetanilide, etc.
For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED
■ The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion.
■ The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating.

EYE
■ When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation.
■ Corneal ulcerations due to hydrogen peroxide exposure may not appear for up to a week after exposure; concentrations above 10% are corrosive to the eye.
■ The material can produce severe chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating.

SKIN
■ The material can produce chemical burns following direct contact with the skin.

INHALED
■ Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system in a substantial number of individuals following inhalation.

CHRONIC HEALTH EFFECTS
■ On the basis, primarily, of animal experiments, concern has been expressed by at least one classification body that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment.
Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.
Hydrogen peroxide as a human food additive is generally regarded as safe when used in certain limitations. In experimental animals, oral administration of hydrogen peroxide causes dental, liver, kidney, stomach, and intestinal damage.
Hydrogen peroxide added to food is affirmed to be generally regarded as safe (GRAS) by the U.S.
Repeated or prolonged exposure to acids may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue.

TOXICITY AND IRRITATION
■ Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound.
For hydrogen peroxide:
Hazard increases with peroxide concentration, high concentrations contain an additive stabiliser.
Pharmacokinetics
Hydrogen peroxide is a normal product of metabolism.

CARCINOGEN

Hydrogen peroxide	International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs	Group	3

Section 12 - ECOLOGICAL INFORMATION

hydrogen peroxide 96 hr LC50 (26.7) mg/L Bluegill Fish Source: Calculated

This material and its container must be disposed of as hazardous waste.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
hydrogen peroxide	LOW		LOW	HIGH
water	LOW		LOW	HIGH

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle where possible
  Otherwise ensure that:
- licenced contractors dispose of the product and its container.
- disposal occurs at a licenced facility.

Section 14 - TRANSPORTATION INFORMATION

Labels Required: OXIDIZING AGENT, CORROSIVE

HAZCHEM:
2P

Land Transport UNDG:

Class or division:	5.1	Subsidiary risk:	8
UN No.:	2014	UN packing group:	II

Shipping Name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION with not less than 20% but not more than 60% hydrogen peroxide (stabilized as necessary)

Air Transport IATA:

ICAO/IATA Class:	5.1	ICAO/IATA Subrisk:	8
UN/ID Number:	2014	Packing Group:	II
Special provisions:	None		

Shipping Name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION

Maritime Transport IMDG:

IMDG Class:	5.1	IMDG Subrisk:	8
UN Number:	2014	Packing Group:	II
EMS Number:	F- H , S- Q	Special provisions:	None
Limited Quantities:	1 L		

Shipping Name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION with not less than 20% but not more than 60% hydrogen peroxide (stabilized as necessary)

Section 15 - REGULATORY INFORMATION

NOTES
This substance should be managed in accordance with the requirements specified in the Cleaning Products (Oxidising [5.1.1], Corrosive) Group Standard 2006, HSNO Approval Number HSR002591.

REGULATIONS
Regulations for ingredients

hydrogen peroxide (CAS: 7722-84-1) is found on the following regulatory lists;
"GESAMP/EHS Composite List - GESAMP Hazard Profiles","IMO IBC Code Chapter 17: Summary of minimum requirements","IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk","International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "International Air Transport Association (IATA) Dangerous Goods Regulations","New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals","New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data","New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods","New Zealand Inventory of Chemicals (NZIoC)","New Zealand Workplace

Exposure Standards (WES)","OECD Representative List of High Production Volume (HPV) Chemicals"

water (CAS: 7732-18-5) is found on the following regulatory lists;
"IMO IBC Code Chapter 18: List of products to which the Code does not apply","New Zealand Inventory of Chemicals (NZIoC)","OECD Representative List of High Production Volume (HPV) Chemicals"

No data for Hydrogen Peroxide 50%

Specific advice on controls required for materials used in New Zealand can be found at http://www.ermanz.govt.nz/search/registers.html

Section 16 - OTHER INFORMATION

NEW ZEALAND POISONS INFORMATION CENTRE: 0800 POISON (0800 764 766)
NZ EMERGENCYSERVICES:111
Emergency response Number 0800 243 622
Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the SDS Classification committee using a valuable literature references.
The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

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