

## Hydrogen Peroxide 50%

### SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	Hydrogen Peroxide 50%
<b>Other Means of Identification</b>	None
<b>Product Code</b>	HY5250
<b>Product Family</b>	Inorganic solution
<b>Recommended Use</b>	Laboratory and industrial use.
<b>Restrictions on Use</b>	None known.
<b>Supplier Identifier</b>	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
<b>Emergency Phone No.</b>	CANUTEC CANADA, 613-996-6666, 24 Hours
<b>SDS No.</b>	0149

### SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

#### Classification

Oxidizing liquid - Category 2; Acute toxicity (Oral) - Category 4; Acute toxicity (Inhalation) - Category 4; Skin corrosion - Category 1C; Serious eye damage - Category 1; Specific target organ toxicity (single exposure) - Category 3

#### Label Elements



Signal Word:  
Danger

#### Hazard Statement(s):

May cause or intensify fire; oxidizer.

Harmful if inhaled.

Toxic if swallowed.

Causes severe skin burns and eye damage.

May cause respiratory irritation.

#### Precautionary Statement(s):

Wash hands and skin thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wear protective gloves/protective clothing/eye protection/face protection.

Avoid release to the environment.

Keep away from heat, sparks, open flames, and hot surfaces. – No smoking.

Keep or store away from clothing and other combustible materials.  
Take any precaution to avoid mixing with combustibles.

**Response:**

IF SWALLOWED: Immediately call a POISON CENTRE or doctor.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN: Wash with plenty of water.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.

IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

Immediately call a POISON CENTRE or doctor.

**Storage:**

Store in a well-ventilated place. Keep container tightly closed.

**Disposal:**

Dispose of contents and container in accordance with local, regional, national and international regulations.

**Other Hazards**

None known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers
Hydrogen peroxide	7722-84-1	50	Dihydrogen dioxide, Hydroperoxide
Water	7732-18-5	50	Dihydrogen Oxide

### SECTION 4. FIRST-AID MEASURES

**First-aid Measures**

**Inhalation**

Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor.  
Avoid mouth-to-mouth contact by using a barrier device.

**Skin Contact**

Immediately rinse skin with lukewarm, gently flowing water for at least 30 minutes. Immediately call a Poison Centre or doctor.

**Eye Contact**

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for at least 30 minutes, while holding the eyelid(s) open. Immediately call a Poison Centre or doctor.

**Ingestion**

Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting. Rinse mouth with water. Immediately call a Poison Centre or doctor. Specific treatment is required.

**First-aid Comments**

Some of the first-aid procedures recommended here require advanced first-aid training. Get medical advice or attention if you feel unwell or are concerned.

**Most Important Symptoms and Effects, Acute and Delayed**

If on skin: repeated or prolonged exposure can irritate or burn the skin. Symptoms include pain, redness, and swelling.  
If in eyes: may cause serious eye damage. May irritate or burn the eyes. Permanent damage including blindness may result.

**Immediate Medical Attention and Special Treatment**

**Special Instructions**

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

## SECTION 5. FIRE-FIGHTING MEASURES

### Extinguishing Media

#### Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire. Use flooding quantities of water spray or fog. Use water to keep non-leaking, fire-exposed containers cool.

#### Unsuitable Extinguishing Media

DO NOT use carbon dioxide, or other agents that smother the flames.

### Specific Hazards Arising from the Product

Does not burn. Mild oxidizer. Releases oxygen to create an oxygen-rich atmosphere. Will cause combustible materials to ignite more readily. May intensify fire. Closed containers may rupture violently when heated releasing contents. In a fire, the following hazardous materials may be generated: flammable hydrogen. Oxygen.

### Special Protective Equipment and Precautions for Fire-fighters

Use extreme caution. Evacuate area. Fight fire from a protected, explosion-resistant location or maximum distance possible. Approach fire from upwind to avoid hazardous vapours or gases. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles. Oxidizer. Prevent contact with flammable and combustible materials. Do NOT apply water directly to spill. Dike and recover contaminated water for appropriate disposal. Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours, flammable or explosive atmosphere, sufficient oxygen.

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment, and Emergency Procedures

Emergency responders: use the personal protective equipment recommended in Section 8 of this safety data sheet. Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Eliminate all ignition sources. Use grounded, explosion-proof equipment.

### Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

### Methods and Materials for Containment and Cleaning Up

Small spills or leaks: stop or reduce leak if safe to do so. Contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal.

Large spills or leaks: dike spilled product to prevent runoff. Remove or recover liquid using pumps or vacuum equipment. Flush spill area. Dike and recover contaminated water for appropriate disposal.

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Avoid breathing in this product. Do not get in eyes, on skin or on clothing. Avoid generating vapours or mists. Only use where there is adequate ventilation. Eliminate heat and ignition sources such as sparks, open flames, hot surfaces and static discharge. Post "No Smoking" signs. Prevent accidental contact with incompatible chemicals. Prevent accidental contact with alkaline conditions. Label container with date received, date opened and disposal date. Keep containers tightly closed when not in use or empty.

### Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated, out of direct sunlight and away from heat and ignition sources, separate from incompatible materials (see Section 10: Stability and Reactivity), clear of combustible and flammable materials (e.g. old rags, cardboard). Store in the original, labelled, shipping container. Store in a closed container. Keep amount in storage to a minimum. Label container with date received, date opened and disposal date. Use a first-in, first-out inventory system. Comply with all applicable health and safety regulations, fire and building codes.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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**Control Parameters**

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Hydrogen peroxide	1 ppm A3		1 ppm			
Water	Not established		Not established			

A3 = Animal carcinogen.

**Appropriate Engineering Controls**

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Use backup controls (e.g. double mechanical pump seals) to prevent the release of this material due to equipment failure. Use an automatic leak detection system. Provide eyewash in work area, if contact or splash hazard exists.

**Individual Protection Measures****Eye/Face Protection**

Wear chemical safety goggles and face shield when contact is possible.

**Skin Protection**

Wear chemical protective clothing e.g. gloves, aprons, boots.

Suitable materials are: butyl rubber, natural rubber, neoprene rubber, nitrile rubber, polyethylene, Viton®, Tychem® BR/LV, Tychem® Responder, Tychem® TK.

The following materials should NOT be used: polyvinyl alcohol.

**Respiratory Protection**

Wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES****Basic Physical and Chemical Properties**

<b>Appearance</b>	Clear colourless liquid.
<b>Odour</b>	Pungent
<b>Odour Threshold</b>	Not available
<b>pH</b>	Not available
<b>Melting Point/Freezing Point</b>	-62 °C (-80 °F) (melting); -62 °C (-80 °F) (freezing)
<b>Initial Boiling Point/Range</b>	114 °C (237 °F)
<b>Flash Point</b>	Not applicable
<b>Evaporation Rate</b>	Not available
<b>Flammability (solid, gas)</b>	Not applicable
<b>Upper/Lower Flammability or Explosive Limit</b>	Not applicable (upper); Not applicable (lower)
<b>Vapour Pressure</b>	24 mm Hg (3 kPa) at 20 °C
<b>Vapour Density (air = 1)</b>	Not available
<b>Relative Density (water = 1)</b>	1.2
<b>Solubility</b>	Soluble in water; Not available (in other liquids)
<b>Partition Coefficient, n-Octanol/Water (Log Kow)</b>	Not available
<b>Auto-ignition Temperature</b>	Not applicable
<b>Decomposition Temperature</b>	Not available
<b>Viscosity</b>	Not available (kinematic); Not available (dynamic)
<b>Other Information</b>	
<b>Physical State</b>	Liquid

**SECTION 10. STABILITY AND REACTIVITY**

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**Reactivity**

Oxidizer. May intensify fire.

**Chemical Stability**

Stable if inhibited.

**Possibility of Hazardous Reactions**

None known.

**Conditions to Avoid**

Open flames, sparks, static discharge, heat and other ignition sources. Alkaline conditions (high pH).

**Incompatible Materials**

Strong bases (e.g. sodium hydroxide), strong acids (e.g. hydrochloric acid), acid anhydrides (e.g. acetic anhydride), alcohols (e.g. ethanol), aldehydes (e.g. acetaldehyde), ketones (e.g. acetone), metals (e.g. aluminum), oxidizing agents (e.g. peroxides), ethers (e.g. diethyl ether).

**Hazardous Decomposition Products**

Oxygen (a strong oxidizer).

**SECTION 11. TOXICOLOGICAL INFORMATION****Likely Routes of Exposure**

Inhalation; skin contact; eye contact; ingestion.

**Acute Toxicity**

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Hydrogen peroxide	2000 ppm (rat) (4-hour exposure)	1232 mg/kg (rat)	> 2000 mg/kg (rabbit)
Water	Not available	> 89840 mg/kg (rat)	Not available

**Skin Corrosion/Irritation**

Animal tests show moderate or severe irritation following repeated applications.

**Serious Eye Damage/Irritation**

Animal tests show serious eye damage.

**STOT (Specific Target Organ Toxicity) - Single Exposure****Inhalation**

Causes severe nose and throat irritation.

**Skin Absorption**

No information was located.

**Ingestion**

Toxic, can cause death Causes severe irritation or burns to the mouth, throat and stomach.

**Aspiration Hazard**

No information was located.

**STOT (Specific Target Organ Toxicity) - Repeated Exposure**

No information was located.

**Respiratory and/or Skin Sensitization**

Not known to be a respiratory sensitizer. No information was located for skin sensitization.

**Carcinogenicity**

Chemical Name	IARC	ACGIH®	NTP	OSHA
Hydrogen peroxide	Group 3	A3	Not Listed	
Water	Not Listed	Not Listed	Not Listed	Not Listed

#### Key to Abbreviations

Group 3 = Not classifiable as to its carcinogenicity to humans.

A3 = Animal carcinogen.

#### Reproductive Toxicity

##### Development of Offspring

Not known to harm the unborn child. Conclusions cannot be drawn from the limited studies available.

##### Sexual Function and Fertility

Not known to cause effects on sexual function or fertility.

##### Effects on or via Lactation

No information was located.

#### Germ Cell Mutagenicity

Conclusions cannot be drawn from the limited studies available.

#### Interactive Effects

No information was located.

## SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

## SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal Methods

Dispose of contents and container in accordance with local, regional, national and international regulations. Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction.

## SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	UN2015	Hydrogen Peroxide, Aqueous Solution	5.1 Oxidizing Substances	I
US DOT	UN2015	Hydrogen Peroxide, Aqueous Solution	5.1	I

**Special Precautions** Not applicable

#### Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15. REGULATORY INFORMATION

#### Safety, Health and Environmental Regulations

##### Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by the Controlled Products Regulations.

##### Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

##### USA

##### Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

## SECTION 16. OTHER INFORMATION

**NFPA Rating**      **Health - 3**      **Flammability - 0**      **Instability - 3**

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**Special Hazard - Oxidizing**

**SDS Prepared By** Alphachem Limited  
**Phone No.** (905)-821-2995  
**Date of Preparation** September 24, 2015  
**Date of Last Revision** June 02, 2016  
**References** CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).  
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