

Hydrogen Peroxide 27%

SECTION 1. IDENTIFICATION

Product Identifier	Hydrogen Peroxide 27%
Other Means of Identification	Dihydrogen dioxide, Hydroperoxide
Product Code(s)	HY5227
Product Family	Inorganic solution
Recommended Use	Laboratory and industrial use.
Restrictions on Use	None known.
Supplier Identifier	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
Emergency Phone No.	CANUTEC CANADA, 613-996-6666, 24 Hours CHEMTREC, 800-424-9300, 24 Hours
SDS No.	0078

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 1A; Serious eye damage - Category 1; Specific target organ toxicity (single exposure) - Category 3

Label Elements



Signal Word:
Danger

Hazard Statement(s):

May intensify fire; oxidizer.
Harmful if swallowed or if inhaled.
May cause respiratory irritation.
Causes severe skin burns and eye damage.

Precautionary Statement(s):

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep or store away from clothing and other combustible materials.
Take any precaution to avoid mixing with combustibles.
Do not breathe dust/fume/gas/mist/vapours/spray.
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.

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

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 INHALED: Remove person to fresh air and keep comfortable for breathing.

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

Storage:

Store in a dry place. Store in a closed container.

Disposal:

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

Other Hazards

Hazardous to the environment.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers
Water	7732-18-5	73	Dihydrogen Oxide
Hydrogen peroxide	7722-84-1	27	Dihydrogen dioxide, Hydroperoxide

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor.

Skin Contact

Rinse with lukewarm, gently flowing water for 5 minutes. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely. 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. Take care not to rinse contaminated water into the unaffected eye or onto the face.

Ingestion

Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting.

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 inhaled: at high concentrations can cause severe irritation of the nose and throat. In rare cases, may cause asthma or an asthma-like reaction.

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

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Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire. Use flooding quantities of water spray or fog. Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Does not burn. Mild oxidizer. May intensify fire. Heating increases the release of toxic vapour. 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

Evacuate area. Fight fire from a safe distance or a protected location. Approach fire from upwind to avoid hazardous vapours or gases. Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours. Oxidizer. Prevent contact with flammable and combustible materials.

Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Emergency responders: evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Eliminate all ignition sources if safe to do so. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Remove or isolate incompatible materials as well as other hazardous materials.

Environmental Precautions

If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas. 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. Flush spill area.

Large spills or leaks: dike and recover contaminated water for appropriate disposal. Remove or recover liquid using pumps or vacuum equipment. Store recovered product in suitable containers that are: tightly-covered, corrosion-resistant. Flush spill area.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Do not get in eyes, on skin or on clothing. Only use where there is adequate ventilation. Prevent accidental contact with incompatible chemicals.

Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated. Protect from sunlight. 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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Provide eyewash and safety shower if contact or splash hazard exists. Use local exhaust ventilation and enclosure, if

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necessary, to control amount in the air.

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® Responder, Tychem® BR/LV, Tychem® TK.

The following materials should NOT be used: polyvinyl alcohol.

Respiratory Protection

Wear a NIOSH approved self-contained breathing apparatus (SCBA) or supplied air respirator, wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Clear colourless liquid.
Odour	Pungent
Odour Threshold	Not available
pH	Not available
Melting Point/Freezing Point	-33 °C (-27 °F) (melting); -33 °C (-27 °F) (freezing)
Initial Boiling Point/Range	> 100 °C (212 °F)
Flash Point	Not applicable
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable
Upper/Lower Flammability or Explosive Limit	Not applicable (upper); Not applicable (lower)
Vapour Pressure	24 mm Hg (3 kPa) at 20 °C
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	1.13
Solubility	Soluble in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not applicable
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); Not available (dynamic)
Other Information	
Physical State	Liquid

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Mild oxidizer. Heating may cause a fire. May intensify fire.

Chemical Stability

Normally stable. Unstable under certain conditions - see Conditions to Avoid.

Possibility of Hazardous Reactions

None known.

Conditions to Avoid

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

Incompatible Materials

Strong bases (e.g. sodium hydroxide), metals (e.g. aluminum), reducing agents (e.g. hydroquinone), strong acids (e.g. hydrochloric acid).

Hazardous Decomposition Products

Toxic, corrosive chemicals; 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 very mild irritation.

Serious Eye Damage/Irritation

Human experience and animal tests show serious eye irritation.

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

Causes nose and throat irritation.

Ingestion

Harmful.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

Respiratory and/or Skin Sensitization

No information was located for skin sensitization. No information was located for respiratory 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

No information was located.

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.

Other Information

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

Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction. Treat waste in an approved waste disposal facility.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	UN2014	Hydrogen Peroxide, Aqueous Solution	5.1, 8	II
US DOT	UN2014	Hydrogen Peroxide, Aqueous Solutions with not less than 20 percent but not more than 40 percent hydrogen peroxide (stabilized as necessary)	5.1, 8	II
IATA (Air)	UN2014	Hydrogen Peroxide, Aqueous Solution	5.1, 8	II

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)

Water:

Listed on the DSL.

Hydrogen peroxide solutions 20% to less than 35%:

Listed on the DSL.

USA

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

Water:

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Listed on the TSCA Inventory.
Hydrogen peroxide solutions 20% to less than 35%:
Listed on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

SDS Prepared By	Alphachem Ltd.
Phone No.	(905)-821-2995
Date of Preparation	August 18, 2015
Date of Last Revision	December 29, 2016
References	CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).
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