

MATERIAL SAFETY DATA SHEET

Product Name: Hydrogen peroxide

CAS No.: 7722-84-1

Version: 0

1. Identification

Product Code : 90172, 90424, 90425, 90426
Company Name : Advent Chembio Private Limited
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2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
HYDROGEN PEROXIDE	7722-84-1	6-50 %

3. Hazards Identification**Hazard classification****Physical hazards**

Oxidizing liquids : Category 2

Health hazards

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation - vapor) : Category 3

Skin corrosion/irritation : Category 1

Serious eye damage/eye irritation : Category 1

Germ cell mutagenicity : Category 1

Specific target organ toxicity - single exposure : Category 3

Environmental hazards

Acute hazards to the aquatic environment : Category 2

Labels elements**Hazard symbol****Signal word** : Danger**Hazard statement** : May intensify fire; oxidizer.
Toxic if inhaled.
Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause respiratory irritation.

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May cause genetic defects.
Causes damage to organs if swallowed.
Toxic to aquatic life.

Precautionary statement**Prevention**

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat. - No smoking. Keep/Store away from clothing/combustible materials. Take any precaution to avoid mixing with combustibles. Wash thoroughly after handling. Do not breathe dust/mist/vapors. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Do not eat, drink or smoke when using this product. Avoid release to the environment.

Response

: In case of fire: Use water spray, foam, dry powder or carbon dioxide for extinction. IF exposed: Call a POISON CENTER or doctor/physician. 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. Wash contaminated clothing before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

Storage

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

Disposal

Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal .

Other hazards which do not result in GHS classification

: None.

4. First Aid Measures**General information**

: Get medical advice/attention if you feel unwell. If medical advice is needed, have product container or label at hand. Show this safety data sheet to the doctor in attendance.

Ingestion

: Call a physician or poison control center immediately. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Inhalation

: Move to fresh air. Call a physician or poison control center immediately. If breathing is difficult, give oxygen. Apply artificial respiration if victim is not breathing .

Skin contact

: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing

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- Eye contact** : before reuse. Destroy or thoroughly clean contaminated shoes.
: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately. In case of irritation from airborne exposure, move to fresh air. Get medical attention immediately .
- Most important symptoms/effects, acute and delayed** : Harmful if swallowed. Toxic if inhaled. Corrosive to skin and eyes.
- Indication of immediate medical attention and special treatment needed** : Treat symptomatically. Symptoms may be delayed.

5. Fire fighting measures

- General fire hazards** : Strong oxidizer - contact with other material may cause fire.
- Suitable (and unsuitable) extinguishing media**
- Suitable extinguishing media** : Water spray, foam, dry powder or carbon dioxide.
- Unsuitable extinguishing media** : None known.
- Specific hazards arising from the chemical** : Strong oxidizer. Contact with combustible material may cause fire.
Pressurized container may explode when exposed to heat or flame.
- Special protective equipment and precautions for firefighters**
- Special fire fighting procedures** : Use water spray to keep fire-exposed containers cool. Fight fire from a protected location. Move containers from fire area if you can do so without risk.
- Special protective equipment for fire-fighters** : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

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- Personal precautions, protective equipment and emergency procedures** : Keep unauthorized personnel away. Use personal protective equipment. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Methods and material for containment and cleaning up** : Eliminate all ignition sources if safe to do so. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.
- Notification Procedures** : Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.
- Environmental precautions** : Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

- Precautions for safe handling** : Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Wash hands thoroughly after handling. Do not get in eyes, on skin, on clothing. Keep away from combustible material. Do not taste or swallow. Do not eat, drink or smoke when using the product. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight .
- Conditions for safe storage, including any incompatibilities** : Keep away from heat. Keep away from sources of ignition - No smoking. Keep away from combustible material. Keep container tightly closed. Store in a well-ventilated place. Store in a dry place.

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8. Exposure Controls Personal Protection

Control parameters Occupational exposure limits

Chemical identity	Type	Exposure Limit values	Source
HYDROGEN PEROXIDE	TWA	1 ppm	US. ACGIH Threshold Limit Values (2011) .
	REL	1 ppm, 1.4 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	1 ppm, 1.4 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	1 ppm, 1.4 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

Appropriate engineering controls : No data available.

Individual protection measures, such as personal protective equipment

- General information** : Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.
- Eye/face protection** : Wear safety glasses with side shields (or goggles) and a face shield .
- Hand protection** : Chemical resistant gloves.
- Other** : Wear appropriate clothing to prevent reasonably probable skin contact.
- Respiratory protection** : In case of inadequate ventilation use suitable respirator. Chemical respirator with acid gas cartridge.
- Hygiene measures** : Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

9. Physical and Chemical Properties

- Appearance** : Colorless Liquid
- Odor** : Mild pungent.
- pH** : 3.3
- Melting point/freezing point** : -25 °C.
- Initial boiling point and boiling range** : 108 °C .
- Flash Point** : Not applicable.
- Vapor pressure** : 3.33 kPa
- Vapor density** : 1.17
- Relative density** : 1.11 (20 °C) .

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Solubility in water : Miscible with water.
Solubility (other) : No data available.
Formula : H₂O₂
Molecular Weight : 34.01 g/mol

10. Stability and Reactivity

Reactivity : No dangerous reaction known under conditions of normal use.
Chemical stability : Stable; however, may decompose if heated.
Possibility of hazardous reactions : Hazardous polymerization does not occur. Decomposes on heating.
Conditions to avoid : Heat. Light. Contact with combustibles. Contact with incompatible materials.
Incompatible materials : Organic compounds. Reducing agents. Flammable/combustible material
Hazardous decomposition products : May decompose upon heating to produce corrosive and/or toxic fumes.

11. Toxicological Information**Information on likely routes of exposure**

Ingestion : May cause burns of the gastrointestinal tract if swallowed.
Inhalation : May cause irritation to the respiratory system.
Skin contact : Causes severe skin burns.
Eye contact : Causes serious eye damage.

Information on toxicological effects**Acute toxicity (list all possible routes of exposure)**

Oral Product : No data available.
Dermal Product : LD 50 (Rat, Male): 1,193 mg/kg
LD 50 (Rat, Female): 1,270 mg/kg .
Inhalation Product : No data available.
Repeated dose toxicity Product : No data available.
Skin corrosion/irritation Product : Causes severe skin burns.
Serious eye damage/eye irritation Product : Causes serious eye damage.
Respiratory or skin sensitization Product : Not a skin sensitizer.
Carcinogenicity Product : Suspected of causing cancer.
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans DIOXANE : No carcinogenic components identified.
US. National Toxicology Program (NTP) Report on Carcinogens DIOXANE : No carcinogenic components identified.
US. OSHA Specifically Regulated : No carcinogenic components identified.

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Substances (29 CFR 1910.1001-1050

Germ cell mutagenicity

In vitro Product

: May cause genetic defects.

In vivo Product

: May cause genetic defects.

Reproductive toxicity Product

: No components toxic to reproduction.

Specific target organ toxicity - single exposure Product

: Lungs. Respiratory tract irritation.

Specific target organ toxicity - repeated exposure Product

: None known.

Aspiration hazard Product

: Not classified.

Other effects

: None known.

12. Ecological Information

Ecotoxicity	
Acute hazards to the aquatic environment :	
Fish Product	: No data available.
Specified substance(s): HYDROGEN PEROXIDE	: LC 50 (Chameleon goby (Tridentiger trigonocephalus), 24 h): 155 mg/l Mortality LC 50 (Jack Mackerel (Trachurus japonicus), 24 h): 89 mg/l Mortality .
Aquatic invertebrates Product	: No data available.
Chronic hazards to the aquatic environment :	
Fish Product	: No data available.
Aquatic invertebrates Product	: No data available.
Toxicity to Aquatic Plants Product:	: No data available.
Persistence and degradability	
Biodegradation Product	: Expected to be readily biodegradable.
BOD/COD ratio Product	: No data available.
Bioaccumulative potential	
Bioconcentration factor (BCF) Product	: No data available on bioaccumulation.
Partition coefficient n-octanol / water (log Kow) Product	: No data available.
Mobility in soil	: The product is water soluble and may spread in water systems.
Other adverse effects	: Toxic to aquatic life.

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13. Disposal consideration

- Disposal instructions** : Discharge, treatment, or disposal may be subject to national, state, or local laws.
- Contaminated packaging** : Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport Information

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
DOT	UN 2014	Hydrogen peroxide, aqueous solutions	5.1, 8	II	No
IMDG	UN 2014	Hydrogen peroxide, aqueous solutions	5.1, 8	II	No
IATA	UN 2014	Hydrogen peroxide, aqueous solutions	5.1, 8	II	No

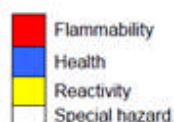
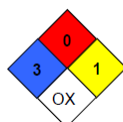
15. Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture
No Data Available.

16. Other Information

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 – Severe OXY: Oxidizer

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