

Product Name	Hydrogen peroxide 50%
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Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identification:

Product Description: Hydrogen peroxide 50%

Synonyms: Hydrogen peroxide 50% Solution, Hydrogen Dioxide; Carbamide peroxide

CAS-No: 7722-84-1

EC-No.: 231-765-0

Molecular Formula: H₂O₂

REACH Registration No: A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration, or the registration is envisaged for a later registration deadline.

1.2. Relevant identified uses of the substance or mixture and uses advised against:

Recommended Use: Laboratory chemicals, Manufacture of substances

1.3. Details of the supplier of the safety data sheet:

- Company** **Finar Limited**
184-186/P, Chacharwadi Vasna,
Sarkhej-Bavla Highway,
Ta.: Sanand, Dist.: Ahmedabad-382110, Gujarat, India.
Web: www.finarchemicals.com
- E-Mail Address** safety.finar@actylis.com; info.finar@actylis.com

1.4. Emergency Telephone Number:

- For Emergency contact on: +91 - 2717 - 616 717

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SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture:

Classification according to Regulation (EC) No 1272/2008

Oxidizing liquids (Category 2), H272

Acute toxicity, Oral (Category 4), H302

Skin corrosion (Sub-category 1B), H314

Serious eye damage (Category 1), H318

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

Long-term (chronic) aquatic hazard (Category 3), H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2. Label Elements:

Labeling according to Regulation (EC) No 1272/2008

Pictogram



Signal word: **Danger**

Hazard statement(s)

H272 May intensify fire; oxidizer.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

H412 Harmful to aquatic life with long lasting effects

Precautionary statement(s)

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

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Supplemental Hazard Statements: None

Reduced labelling (≤ 125 ml)

Pictogram



Signal word: **Danger**

Hazard statement(s)

H314 Causes severe skin burns and eye damage.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Statements: None

2.3. Other Hazards:

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. **Substances:** Hydrogen peroxide 50%

3.2. **Mixtures:**

Component	CAS-No	EC-No.	Weight %
Hydrogen peroxide	7722-84-1	231-765-0	50%
Water	7732-18-5	231-791-2	50%

For the full text of the H-Statements mentioned in this Section, see Section 16.

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SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures:

- **General advice**

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

- **If inhaled**

Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

- **If Contact with skin**

Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. Immediate medical attention is required.

- **In case of eye contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Immediate medical attention is required.

- **If swallowed**

Do not induce vomiting. Never give anything by mouth to an unconscious person.
Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed:

Causes severe eye damage. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

4.3. Indication of any immediate medical attention and special treatment needed:

Treat symptomatically

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media:

Suitable Extinguishing Media- Use water spray, alcohol-resistant foam and carbon dioxide.

Unsuitable extinguishing media- Dry chemical

5.2. Special hazards arising from the substance or mixture:

Nature of decomposition products not known.

Not combustible.

Has a fire-promoting effect due to release of oxygen.

Ambient fire may liberate hazardous vapours.

Oxidizer: Contact with combustible/organic material may cause fire. In the event of fire and/or explosion

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do not breathe fumes. Containers may explode when heated. May ignite combustibles (wood paper, oil, clothing, etc.).

5.3. Advice for firefighters:

Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus.

Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further Information:

Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact.

Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

6.2. Environmental precautions:

Do not let product enter drains. Should not be released into the environment. See Section 12 for additional Ecological Information. Avoid release to the environment. Collect spillage.

6.3. Methods and material for containment and cleaning up:

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material and neutralising material.

Dispose of properly. Clean up affected area.

6.4. Reference to other sections:

For disposal see Sections 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling:

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Do not breathe mist/Vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Ensure adequate ventilation.

7.2. Conditions for safe storage, including any incompatibilities:

Storage conditions

Keep away from combustible material. Keep cool and protect from sunlight. Keep container tightly closed in a dry and well-ventilated place. Do not store in metal containers. Keep only in the original container.

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Incompatible Materials. Finely powdered metals. copper. Reducing Agent. Strong bases. Combustible material. Organic materials. Keep away from open flames, hot surfaces and sources of ignition.

Light sensitive. Handle and open container with care.

Storage class (TRGS 510): 5.1B: Oxidizing hazardous materials

7.3. Specific end use(s):

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters:

Ingredients with workplace control parameters

8.2. Exposure Controls:

Appropriate Engineering Controls:

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Hygiene Measures:

Handle in accordance with good industrial hygiene and safety practice.

Personal Protective Equipment:

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

- **Eye & Face Protection-**

Tightly fitting safety goggles

- **Hand Protection**

Full contact: -

Glove material : Nitrile rubber

Glove thickness : 0.11 mm

Break through time: >480 min

Splash contact: -

Glove material : Nitrile rubber

Glove thickness : 0.11 mm

Break through time: >480 min .

- **Other Protective equipment**

Protective clothing.

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- **Respiratory Protection**

Required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

- **Environmental Exposure Controls**

Do not let product enter drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

- **Appearance:** Clear
- **Physical State:** Liquid
- **Odor:** Pungent
- **Odor Threshold:** No data available
- **pH (1% soln/water):** Not available
- **Melting Point:** -33°C
- **Critical Temperature:** Not available
- **Vapor Pressure:** 23 mm Hg @30°C
- **Vapor Density:** 1.1 (Air = 1)
- **Specific Gravity:** 1.2 (Water = 1)
- **Auto-Ignition Temperature:** Not applicable
- **Ignition Temperature:** No data available
- **Decomposition Temperature:** No data available
- **Volatility:** Not available
- **Viscosity, dynamic:** No data available
- **Viscosity, Kinematic:** No data available
- **Water/Oil Dist. Coeff.:** Not available
- **Ionicity (in Water):** Not available
- **Lower Explosion Limit:** No data available
- **Upper Explosion Limit:** No data available
- **Boiling Point/Range:** 108°C

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- **Flash Point:** Not applicable
- **Water Solubility:** Soluble in water

9.2. Other information:

- **Molecular Formula:** H_2O_2
- **Molecular Weight:** 34 g/mol

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:

Has a fire-promoting effect due to release of oxygen.

10.2. Chemical stability:

Oxidizer: Contact with combustible/organic material may cause fire. Light sensitive

10.3. Possibility of hazardous reactions:

Risk of explosion with: Acetaldehyde, Acetone, Activated charcoal, Alcohols, formic acid, Ammonia, combustible substances, vinyl acetate, Organic Substances, Powdered metals, Dust, hydrazine and derivatives, hydrides, Ether, Potassium, anilines, Metallic salts, acetic acid, Acetic anhydride, Formaldehyde, furfuryl alcohol, oils, sodium, Lithium, lithium aluminium hydride, organic solvents, Magnesium, metallic oxides, Methanol, Reducing agents, Oxides of phosphorus, butanol with Sulphuric Acid, alkali hydroxides with Heavy metals.

Exothermic reaction with alkali hydroxides, antimony sulfide, tin (II) chloride, Sulfides 3-BROMO-5-CHLORO-4-HYDROXYBENZALDEHYDE, nitric acid (conc.), ethanol, glycerol, Potassium hydroxide, Phosphorus, metallic oxides, Sodium hydroxide, Aldehydes, nonmetals, nonmetallic oxides, strong alkalis, Amines, Acids, Oxidizing agents, alkali salts, Alkali metals, Alkaline earth metals, iodides, peroxi compounds, Brass, organic nitro compounds, phenol with metal catalysts, Risk of ignition or formation of inflammable gases or vapours with: potassium permanganate, Wood/Sawdust, vinyl acetate with Catalyst

10.4. Conditions to avoid:

Incompatible products. Excess heat. Exposure to light. Combustible material.

10.5. Incompatible materials:

Finely powdered metals, copper, Reducing Agent, Strong bases, Combustible material, Organic materials.

10.6. Hazardous decomposition products:

Hazardous decomposition products - Oxygen

In the event of fire: see section 5.

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SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Acute toxicity

LD50 Oral - Rat – 376 mg/kg

(OECD Test Guideline 401)

LD50 Dermal - Rabbit > 2000 mg/kg

(US-EPA)

Skin irritation

Remarks: After long-term exposure to the chemical: Causes skin burns

Eye irritation

Mixture causes serious eye damage. Risk of blindness

Sensitisation

No data available

Germ cell mutagenicity

Method: OECD Test Guideline 474

Species: Mouse - male and female - Bone marrow

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Teratogenicity

No data available

Specific target organ toxicity - single exposure

Mixture may cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Further Information:

Dizziness, Unconsciousness, Diarrhea, Nausea, Vomiting, Headache, Convulsions, muscle twitching,

Insomnia, shock, Irritation and corrosion, conjunctivitis, Risk of serious damage to eyes.

Other dangerous properties cannot be excluded.

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Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

Toxicity to fish

semi-static test LC50 – fresh water fish – 16.4 mg/l - 96 h (US-EPA)

Toxicity to algae

static test EC50 - 2.5mg/l - 72 h

12.2 Persistence and degradability:

No data available

12.3 Bioaccumulate potential:

No data available

12.4 Mobility in soil:

No data available

12.5 Results of PBT and vPvB assessment:

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects:

Biological effects: Harmful effect due to pH shift, Does not cause biological oxygen deficit.

Endangers drinking-water supplies if allowed to enter soil and/or waters in large quantities.

Neutralisation possible in wastewater treatment plants. Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1 Waste treatment methods:

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste.

Handle uncleaned containers like the product itself.

Contaminated packaging

Dispose of as unused product.

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SECTION 14: Transport information

	Land transport (ADR/RID)	Air transport (IATA)	Sea transport (IMDG)
14.1 UN number	UN 2014		
14.2 Proper shipping name	HYDROGEN PEROXIDE, AQUEOUS SOLUTIONS		
14.3 Class	5.1 (8)		
14.4 Packing group	II		
14.5 Environmentally hazardous	--		
14.6 Special precautions for user	No data available		
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not Relevant		

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:**

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

Authorizations and/or restrictions on use

Regulation (EU) 2019/1148 on the marketing : Hydrogen Peroxide
and use of explosives precursors

15.2 Chemical safety assessment:

For this product a chemical safety assessment was not carried out.

SECTION 16: Other information**Full text of H-Statements referred to under sections 2 and 3.**

H271 May cause fire or explosion; strong oxidizer.

H272 May intensify fire; oxidizer.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H412 Harmful to aquatic life with long lasting effects.

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Training advice

Provide adequate information, instruction and training for operators.

References: Not available

Created: 01/11/2023

Disclaimer:

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