

# H2O2

## SAFETY DATA SHEET

### HYDROGEN PEROXIDE - SAFETY & AND HANDLING INFORMATION

SAC/SDS/2025/10

Next Revision due on – 10/2027



## 1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

**Supplier:** DCM Shriram Ltd. (Unit: Shriram Alkali & Chemicals)  
749/GIDC, Jhagadia-393110, Dist- Bharuch, Gujarat.

**Phone No:** (02645-222000/222015) ;Ext: 405

**Substance:** Hydrogen Peroxide

**CAS No. :** 7722-84-1

**Trade Name/Synonyms:** Dihydrogen dioxide (H2O2)

**Application:** This chemical finds its application in multiple applications, mostly in the manufacturing of pulp and paper, textiles, wastewater treatment, food treatment, pharma and cosmetics

## 2. HAZARDS IDENTIFICATION

### GHS Label Information



### Hazard Statements:

- H272 : May intensify fire; Oxidiser.
- H315 : Causes skin irritation.
- H302 : Harmful if swallowed.
- H332 : Harmful if inhaled.
- H335 : May cause respiratory irritation.
- H401 : Toxic to aquatic life.

### NFPA RATING:

Health Rating: 3 - Severe  
Flammability Rating : 0 - None  
Reactivity Rating: 1 - Low  
Special: None

### RISK PHRASES:

35 : Causes severe burns.

**SAFETY PHRASES:**

1/2 : Keep locked and out of the reach of children

26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

37/39: Wear suitable gloves and eye/face protection

45 : In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

### **3. COMPOSITION INFORMATION ON INGREDIENTS**

**Component substance:** Hydrogen peroxide

**Molecular formula :** H2O2

**Molecular Weight:** 34 gm/mol

**Component Percent:** 35 – 60 % by weight

**CAS No:** 7722-84-1

**EC/EINECS/ELINCS No:** 231-765-0

**H. S. Code No:** 28470000

### **4. FIRST AID MEASURES**

Overexposure is to be avoided. In case of any exposure, obtain medical attention.

**Inhalation:**

- Move to fresh air
- Oxygen or artificial respiration as needed
- Victim to lie down in the recovery position, cover and keep him warm
- Call a physician immediately

**Symptoms:** Breathing difficulties, Cough, pulmonary oedema, Nausea, Vomiting repeated.

**On prolonged exposure:** Nose bleeding, chronic bronchitis. Get medical attention immediately

**Ingestion:**

- Call a physician or poison control centre immediately
- Take victim immediately to hospital
- If swallowed, rinse mouth with water (only if the person is conscious)
- Do NOT induce vomiting
- Artificial respiration and/or oxygen may be necessary

**Symptoms:** Nausea, Abdominal pain, Bloody vomiting, Diarrhea, Suffocation, Cough, shortness of breath. Risk of respiratory disorder.

Get medical attention immediately.

**Skin Contact:**

- Rinse immediately with plenty of water
- The material is irritating and corrosive to the skin and may cause severe burns
- Symptoms: redness, swelling of tissue. If symptoms persist, get medical attention immediately

**Eye Contact:**

- Rinse immediately with plenty of water
- Small amounts splashed into the eyes can cause irreversible tissue damage and blindness

## 5. FIRE FIGHTING MEASURES

**Suitable extinguishing media:**

Water and water spray

**Extinguishing media which shall not be used for safety reasons:**

None

**Special exposure hazards in a fire:**

Not combustible.

- Oxygen released in thermal decomposition may support combustion
- The nature of decomposition for the products is not known
- Ambient fire may liberate hazardous vapours

**Special Information:**

- In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with a full face piece operated in the pressure demand or other positive pressure mode

## 6. ACCIDENTAL RELEASE MEASURES

**General Information:** Use proper personal protective equipment as indicated in Section 8

**Spills/Leaks:** Soak up with inert absorbent material and place into a suitable disposal container

- Avoid runoff into storm sewers and ditches which lead to waterways
- Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

## 7. HANDLING AND STORAGE

### **Precaution for safe handling**

- Carry out all operations in a closed piping circuit and equipment
- Use only in well-ventilated areas
- Keep away from heat
- Keep away from Incompatible products
- May not get in touch with organic product
- Use only equipment and materials which are compatible with the product
- Before all operations, passivate the piping circuits and vessels according to the procedure recommended by the producer
- Never return unused material to the storage receptacle
- Use only in an area with adequate water supply
- Containers and equipment used to handle the product should be used exclusively for that product
- Do not confine the product in a circuit, between closed valves, or in a container without a vent

### **Condition for safe storage, including any incompatibilities**

- Keep in a shaded, well-ventilated place
- Keep away from heat and direct sunlight
- Keep away from Incompatible products
- Keep away from combustible material
- Store in a receptacle equipped with a vent
- Store in the original container
- Keep the container closed
- Regularly check the condition and temperature of the containers.
- Information about special precautions needed for bulk handling is available on request

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### **Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

**Personal Respirators:**

Self-contained breathing apparatus in confined spaces/insufficient oxygen/in case of large uncontrolled emissions/in all circumstances when the mask and cartridge do not give adequate protection. Use only respiratory protection that conforms to international/national standards. Use NIOSH-approved respiratory protection. Wear an approved full-face air-supplied respirator for excessive or unknown concentrations. Selected chemical cartridges for respirators, i.e. OV, OV/AG, GME has been tested successfully under lab conditions to remove hydrogen peroxide and peracetic acid vapours in concentrations exceeding the applicable exposure limits. Use a self-contained breathing apparatus in case of large uncontrolled emissions, insufficient oxygen and if the mask and cartridge do not give adequate protection.

**Skin Protection:**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Eye Protection:**

Use chemical safety goggles and/or a full face shield where splashing is possible.

Maintain eye wash fountain and quick-drench facilities in the work area.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Liquid

**Appearance:** Colorless

**Odour:** Odourless

**Solubility:** Soluble in water

**Specific Gravity:** 1.125 - 1.300

**pH:** 1.5 - 3.0

**Boiling Point:** 110 - 125 °C

**Flash Point- Remarks:** The product is not flammable

**Freezing Point:** -40.3 °C

**Flammability:** Lower explosion limit (the product is not flammable)

**Explosive Properties:** Not Explosive

**Vapour Density (Air=1):** 1 (H2O2 50 %)

**Vapor Pressure (mm Hg):** 200 Pa (H2O2 70 %)

**Temperature:** 30 °C ( 86 °F ) 214 Pa (Pure substance)

**Temperature:** 20 °C ( 68 °F )

**LEL:** Not applicable

**UEL:** Not applicable

## 10. STABILITY AND REACTIVITY

### Reactivity

- ☒ Strong Oxidizer. Contact with other non-compatible materials may cause fire
- ☒ Potential for exothermic hazard
- ☒ Decomposes on heating

### Chemical Stability

- ☒ Stable under recommended storage conditions
- ☒ Possibility of hazardous reactions
- ☒ Contact with combustible material may cause a fire
- ☒ Contact with flammables may cause fire or explosions
- ☒ Risk of explosion if heated under confinement
- ☒ Fire or intense heat may cause violet rupture

### Conditions to avoid

- ☒ Contamination
- ☒ To avoid thermal decomposition, do not overheat.
- ☒ Keep at a temperature not exceeding: 60 °C

### Incompatible Materials

- ☒ Acids, bases, metals, Salts of metals, reducing agents, organic materials, flammable materials

### Hazardous decomposition products

- ☒ Oxygen.
- ☒ The release of other hazardous decomposition products is possible if contaminated with incompatible material.

## 11. TOXICOLOGICAL INFORMATION

### Acute oral toxicity

- LD50, rat, 841 mg/kgbw (H2O2 60 %)

### Acute inhalation toxicity

- LC50, 4 h, rat, 2.000 mg/m3 (Hydrogen peroxide)

**Acute dermal toxicity**

- LD50, rabbit, > 2.000 mg/kg corrosive (H2O2 70 %)

**Skin corrosion/irritation**

- Rabbit, Skin irritation, corrosive effect 1 hr (H2O2 60 %)

**Eye irritation**

- Risk of serious damage to eyes. (H2O2 70 %)

**Irritation (other route)**

- Inhalation, mouse, Irritating to respiratory system., RD 50 = 665 mg/m3 (Hydrogen peroxide)

**Sensitization**

- Guinea pig, Did not cause sensitization on laboratory animals.

**Chronic toxicity**

- Oral, Prolonged exposure, Various species, Target Organs: Gastrointestinal tract, observed effect
- Inhalation, Repeated exposure, dog, LOEL: 14.6 mg/m3, irritant effects

**Carcinogenicity**

- Oral, Prolonged exposure, mouse, Target Organs: duodenum, carcinogenic effects
- Dermal, Prolonged exposure, mouse, Animal testing did not show any carcinogenic effects.

## 12. ECOLOGICAL INFORMATION

**Ecological Overview**

**Toxicity to fishes:** LC50, 96 h, 16.4 mg/l (Pure substance)

**Toxicity to bacteria:** Not listed

**Other adverse effects:** Not listed

**Harmful to aquatic animals, so do not discharge into drains.**

## 13. DISPOSAL CONSIDERATIONS

Waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

## 14. TRANSPORT INFORMATION

**Shipping Name:** Hydrogen peroxide

**UN No:** 2014

**Hazard Class:** Class 8

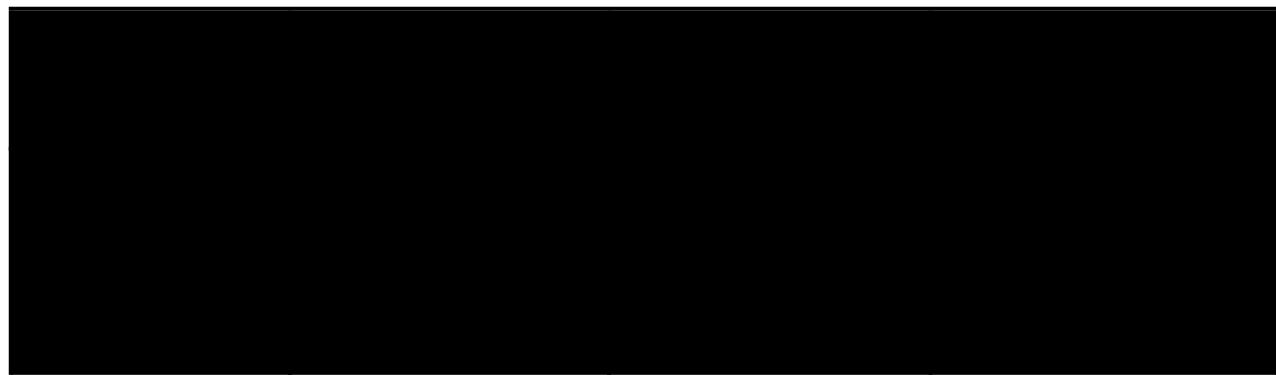
**Label:** 5.1 - Oxidizing substances

**Packaging:** Approved HDPE drum & Stainless steel packing

## 15. REGULATORY INFORMATION

- Refer Section-2
- As per National / State regulations

## 16. OTHER INFORMATION



### **Disclaimer:**

Shriram Alkali and Chemicals (SAC) provides this information which is commonly known and generally available with respect to this product; but makes no representation of its comprehensiveness or accuracy. This information is given only as a guide for the right way to handle the material by a trained person. Persons receiving the information must use their judgment in determining its appropriateness for a particular purpose. SAC makes no representations or warranties, either expressed or implied, including limitations, any warranties of merchantability, fitness for a particular purpose with respect to the information given herein or the product to which the information refers. Accordingly, SAC will not be responsible for damages resulting from the use of or reliance upon this information.



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