# SAFETY DATA SHEET

**Creation Date** 22-September-2009 **Revision Date** 18-December-2025 **Revision Number** 14

**This safety data sheet was created pursuant to the requirements of: Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) - SOR 2022-272**

## 1. Identification

**Product Name** **Hydrogen peroxide, 30%**

**Cat No. :** **H325-4; H325-4LC; H325-30GAL; H325-100; H325-500; H325-500LC; NC1705534; XXHPERSODS55GAL; XXH325PD200LI; NC1744285; NC1887234; NC2051090**

**Synonyms** Hydrogen Dioxide; Peroxide; Carbamide Peroxide

**Recommended Use** Laboratory chemicals.
**Uses advised against** Food, drug, pesticide or biocidal product use.

**Details of the supplier of the safety data sheet**

**Company**
**Importer/Distributor**
Fisher Scientific
112 Colonnade Road,
Ottawa, ON K2E 7L6,
Canada
Tel: 1-800-234-7437

**Manufacturer**
Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

**Emergency Telephone Number**
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

## 2. Hazard(s) identification

**Classification**

**WHMIS 2015 Classification** This product is hazardous in accordance with the Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended (SOR/2022-272)

| | |
|---|---|
| **Oxidizing liquids** | Category 2 |
| **Acute oral toxicity** | Category 4 |
| **Acute Inhalation Toxicity** | Category 4 |
| **Skin Corrosion/Irritation** | Category 1 A |
| **Serious Eye Damage/Eye Irritation** | Category 1 |

**Label Elements**

**Signal Word**
Danger

**Hazard Statements**
May intensify fire; oxidizer
Harmful if swallowed or if inhaled
Causes severe skin burns and eye damage

**Precautionary Statements**
**Prevention**
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Keep away from clothing and other combustible materials.
Take any precaution to avoid mixing with combustibles
Do not breathe dust/fumes/gas/mist/vapours/spray
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
**Response**
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower
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
Immediately call a POISON CENTER/doctor
Rinse mouth
Do NOT induce vomiting
Wash contaminated clothing before reuse
In case of fire: Use water spray/fog or regular foam to extinguish
**Storage**
Store locked up
Store in a well-ventilated place. Keep container tightly closed
**Disposal**
Dispose of contents/container to an approved waste disposal plant

**Other Hazards**
Light sensitive

## 3. Composition/Information on Ingredients

| Component | CAS-No | Weight % |
|---|---|---|
| Water | 7732-18-5 | 65 - 80 |
| Hydrogen peroxide | 7722-84-1 | 20 - 35 |

## 4. First-aid measures

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

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

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Call a physician

immediately.

**Inhalation** If not breathing, give artificial respiration. Remove from exposure, lie down. 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. Call a physician immediately.

**Ingestion** Do NOT induce vomiting. Clean mouth with water. Never give anything by mouth to an unconscious person. Call a physician immediately.

**Most important symptoms/effects** Causes severe eye damage. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

**Notes to Physician** Treat symptomatically

## 5. Fire-fighting measures

**Suitable Extinguishing Media** Water spray. Foam. Carbon dioxide ($CO_2$).

**Unsuitable Extinguishing Media** Dry chemical

**Flash Point** Not applicable
**Method -** No information available

**Autoignition Temperature** No information available
**Explosion Limits**
**Upper** No data available
**Lower** No data available
**Oxidizing Properties** Oxidizer

**Sensitivity to Mechanical Impact** No information available
**Sensitivity to Static Discharge** No information available

**Specific Hazards Arising from the Chemical**
Oxidizer: Contact with combustible/organic material may cause fire. In the event of fire and/or explosion do not breathe fumes. Containers may explode when heated. May ignite combustibles (wood paper, oil, clothing, etc.).

**Hazardous Combustion Products**
Hydrogen. Oxygen.
**Protective Equipment and Precautions for Firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

**NFPA**

| Health | Flammability | Instability | Physical hazards |
|---|---|---|---|
| 3 | 0 | 2 | OX |

## 6. Accidental release measures

**Personal Precautions** Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Environmental Precautions** Should not be released into the environment. See Section 12 for additional Ecological Information. Avoid release to the environment. Collect spillage.

**Methods for Containment and Clean Up** Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

## 7. Handling and storage

**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.

**Storage.** 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. Incompatible Materials. Finely powdered metals. copper. Reducing Agent. Strong bases. Combustible material. Organic materials.

## 8. Exposure controls / personal protection

**Exposure Guidelines**

| Component | Alberta | British Columbia | Ontario TWAEV | Quebec |
|---|---|---|---|---|
| Hydrogen peroxide | TWA: 1 ppm<br>TWA: 1.4 mg/m³ | TWA: 1 ppm | TWA: 1 ppm | TWA: 1 ppm |

| Component | Manitoba | New Brunswick | Newfoundland and Labrador | Nova Scotia |
|---|---|---|---|---|
| Hydrogen peroxide | TWA: 1 ppm | TWA: 1 ppm | TWA: 1 ppm | TWA: 1 ppm |

| Component | Nunavut | Prince Edward Island | Saskatchewan | Yukon |
|---|---|---|---|---|
| Hydrogen peroxide | TWA: 1 ppm<br>STEL: 2 ppm | TWA: 1 ppm | TWA: 1 ppm<br>STEL: 2 ppm | TWA: 1 ppm<br>TWA: 1.5 mg/m³<br>STEL: 2 ppm<br>STEL: 2.8 mg/m³ |

| Component | ACGIH TLV | OSHA PEL | NIOSH |
|---|---|---|---|
| Hydrogen peroxide<br>7722-84-1 ( 20 - 35 ) | TWA: 1 ppm | (Vacated) TWA: 1 ppm<br>(Vacated) TWA: 1.4 mg/m³<br>TWA: 1 ppm<br>TWA: 1.4 mg/m³ | IDLH: 75 ppm<br>REL = 1 ppm (TWA)<br>REL = 1.4 mg/m³ (TWA) |

**Legend**

*ACGIH - American Conference of Governmental Industrial Hygienists*
*OSHA - Occupational Safety and Health Administration*
*NIOSH: NIOSH - National Institute for Occupational Safety and Health*

**Engineering Measures** Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.
Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

**Personal protective equipment**

**Eye Protection** Goggles
**Hand Protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

| Glove material | Breakthrough time | Glove thickness | Glove comments |
|---|---|---|---|
| Natural rubber<br>Nitrile rubber<br>Neoprene<br>PVC | See manufacturers recommendations | - | Splash protection only |

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

**Respiratory Protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly
**Recommended Filter type:** Particulates filter conforming to EN 143 Inorganic gases and vapours filter Type B Grey conforming to EN14387

When RPE is used a face piece Fit Test should be conducted

**Environmental exposure controls**
Prevent product from entering drains. Do not allow material to contaminate ground water system.

**Hygiene Measures**
Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

## 9. Physical and chemical properties

**Appearance**

| | | |
|---|---|---|
| **Physical State** | Liquid | |
| **Color** | Clear | |
| **Odor** | pungent | |
| **Odor Threshold** | No information available | |

| **Property** | **Values** | **Remarks • Method** |
|---|---|---|
| **Melting Point/Range** | -33 °C / -27.4 °F | |
| **Softening Point** | No data available | |
| **Boiling Point/Range** | 108 °C / 226.4 °F | @ 760 mmHg |
| **Flash Point** | Not applicable | **Method -** No information available |
| **Flammability (liquid)** | No data available | |
| **Flammability (solid,gas)** | Not applicable | Liquid |
| **Explosion Limits** | No data available | |
| **Autoignition Temperature** | No data available | |
| **Decomposition Temperature** | No data available | |
| **pH** | 3.3 | (30 %) |
| **Viscosity** | No data available | |
| **Water Solubility** | Miscible | |
| **Solubility in other solvents** | No information available | |

**Partition Coefficient (n-octanol/water)**

| **Component** | **log Pow** |
|---|---|
| Hydrogen peroxide | -1.1 |

| | | |
|---|---|---|
| **Vapor Pressure** | 23 mmHg @ 30 °C | |
| **Density / Specific Gravity** | 1.11 | |
| **Bulk Density** | Not applicable | Liquid |
| **Vapor Density** | 1.10 | (Air = 1.0) |
| **Particle characteristics** | Not applicable (liquid) | |

**Other Information**

| | |
|---|---|
| **Molecular Formula** | H2O2 |
| **Molecular Weight** | 34.01 |
| **Oxidizing Properties** | Oxidizer |
| **Evaporation Rate** | >1.0 (Butyl Acetate = 1.0) |

## 10. Stability and reactivity

**Reactive Hazard** Yes

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

**Conditions to Avoid** Incompatible products. Excess heat. Exposure to light. Combustible material.

**Incompatible Materials** Finely powdered metals, copper, Reducing Agent, Strong bases, Combustible material, Organic materials

**Hazardous Decomposition Products** Hydrogen, Oxygen

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

**Information on expected route of exposure**

**Inhalation** Harmful by inhalation.
**Ingestion** May be harmful if swallowed.
**Eyes** Avoid contact with eyes. Corrosive to the eyes and may cause severe damage including blindness.
**Skin** Avoid contact with skin. Causes burns.

**Toxicology data for the components**

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|---|---|---|
| Water | - | - | - |
| Hydrogen peroxide | 376 mg/kg ( Rat ) (90%)<br>910 mg/kg ( Rat ) (20-60%)<br>1518 mg/kg ( Rat ) (8-20% sol) | >2000 mg/kg ( Rabbit ) | LC50 = 2000 mg/m³ ( Rat ) 4 h |

**Toxicologically Synergistic Products** No information available

**(b) skin corrosion/irritation;** No data available

**(c) serious eye damage/irritation;** Category 1
Bridging principle "Dilution"

**(d) respiratory or skin sensitization;**
**Respiratory** No data available
**Skin** No data available

**(e) germ cell mutagenicity;** No data available

**(f) carcinogenicity;**

The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component | CAS-No | IARC | NTP | ACGIH | OSHA | Mexico |
|---|---|---|---|---|---|---|
| Water | 7732-18-5 | Not listed | Not listed | Not listed | Not listed | Not listed |
| Hydrogen peroxide | 7722-84-1 | Not listed | Not listed | A3 | Not listed | A3 |

*IARC (International Agency for Research on Cancer)*

*ACGIH: (American Conference of Governmental Industrial*

*IARC (International Agency for Research on Cancer)*
*Group 1 - Carcinogenic to Humans*
*Group 2A - Probably Carcinogenic to Humans*
*Group 2B - Possibly Carcinogenic to Humans*
*A1 - Known Human Carcinogen*

*Hygienists)*

*A2 - Suspected Human Carcinogen*
*A3 - Animal Carcinogen*
*ACGIH: (American Conference of Governmental Industrial Hygienists)*

*Mexico - Occupational Exposure Limits - Carcinogens*

*Mexico - Occupational Exposure Limits - Carcinogens*
*A1 - Confirmed Human Carcinogen*
*A2 - Suspected Human Carcinogen*
*A3 - Confirmed Animal Carcinogen*
*A4 - Not Classifiable as a Human Carcinogen*
*A5 - Not Suspected as a Human Carcinogen*

**(g) reproductive toxicity;** No data available

**(h) STOT-single exposure;** No data available

**(i) STOT-repeated exposure;** No data available

**Target Organs** No information available.

**(j) aspiration hazard;** No data available

**Symptoms / effects,both acute and delayed** Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

**Other Adverse Effects** The toxicological properties have not been fully investigated.

**Endocrine Disrupting Properties** This product does not contain any known or suspected endocrine disruptors.

## 12. Ecological information

**Ecotoxicity**

Contains a substance which is:. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do not empty into drains. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system.

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|---|---|---|---|---|
| Hydrogen peroxide | EC50 2.5 mg/L/72h | LC50: 16.4 mg/L/96h (P.promelas) | Not listed | EC50 7.7 mg/L/24h |

**Persistence and Degradability** Persistence is unlikely based on information available. Miscible with water

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

| Component | log Pow |
|---|---|
| Hydrogen peroxide | -1.1 |

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT**

**UN-No** UN2014
**Proper Shipping Name** HYDROGEN PEROXIDE, AQUEOUS SOLUTIONS
**Hazard Class** 5.1

**Subsidiary Hazard Class** 8
**Packing Group** II

**TDG**

**UN-No** UN2014
**Proper Shipping Name** HYDROGEN PEROXIDE, AQUEOUS SOLUTION
**Hazard Class** 5.1
**Subsidiary Hazard Class** 8
**Packing Group** II

**IATA**

**UN-No** UN2014
**Proper Shipping Name** HYDROGEN PEROXIDE, AQUEOUS SOLUTION
**Hazard Class** 5.1
**Subsidiary Hazard Class** 8
**Packing Group** II

**IMDG/IMO**

**UN-No** UN2014
**Proper Shipping Name** HYDROGEN PEROXIDE, AQUEOUS SOLUTION
**Hazard Class** 5.1
**Subsidiary Hazard Class** 8
**Packing Group** II

## 15. Regulatory information

**International Inventories**

| Component | CAS-No | DSL | NDSL | TSCA | TSCA Inventory notification - Active-Inactive | EINECS | ELINCS | NLP |
|---|---|---|---|---|---|---|---|---|
| Water | 7732-18-5 | X | - | X | ACTIVE | 231-791-2 | - | - |
| Hydrogen peroxide | 7722-84-1 | X | - | X | ACTIVE | 231-765-0 | - | - |

| Component | CAS-No | IECSC | KECL | ENCS | ISHL | TCSI | AICS | NZIoC | PICCS |
|---|---|---|---|---|---|---|---|---|---|
| Water | 7732-18-5 | X | KE-35400 | X | - | X | X | X | X |
| Hydrogen peroxide | 7722-84-1 | X | KE-20204 | X | X | X | X | X | X |

**Legend:**
X - Listed '-' - Not listed
**KECL** - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
**IECSC** - Chinese Inventory of Existing Chemical Substances
**KECL** - Korean Existing and Evaluated Chemical Substances
**ENCS** - Japanese Existing and New Chemical Substances
**AICS** - Australian Inventory of Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**Canada**

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and its amendments and meets the requirements of the HPR (Paragraph 13(1)(a) of the revised Hazardous Products Act (HPA)).

**Other International Regulations**

**Authorisation/Restrictions according to EU REACH**

| Component | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|---|---|---|---|
| Hydrogen peroxide | - | Use restricted. See entry 75. | - |

| | | | |
|---|---|---|---|
| | | (see link for restriction details) | |

**REACH links**
*https://echa.europa.eu/substances-restricted-under-reach*

**Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?**
Not applicable

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

| Component | CAS-No | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|---|---|---|---|---|---|
| Water | 7732-18-5 | Listed | Not applicable | Not applicable | Not applicable |
| Hydrogen peroxide | 7722-84-1 | Listed | Not applicable | Not applicable | Not applicable |

| Component | CAS-No | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|---|---|---|---|---|---|
| Water | 7732-18-5 | Not applicable | Not applicable | Not applicable | Not applicable |
| Hydrogen peroxide | 7722-84-1 | Not applicable | Not applicable | Not applicable | Not applicable |

## 16. Other information

**Prepared By**
Product stewardship (Regulatory Affairs)
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**Revision Summary** This document has been updated to comply with the requirements of WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) to align with the Globally Harmonised System (GHS) (V7/8) for the Classification and Labelling of Chemicals.

**Disclaimer**

**The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text**

**End of SDS**