



Material Safety Data Sheet

Creation Date 09-Jun-2009

Revision Date 26-Sep-2009

Revision Number 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Hydrogen Peroxide 3%

Cat No. H312-4; H312-500; H312P-4; H312SAM-1; H312SAM-2; H312SAM-3; H324-500

Synonyms Hydrogen dioxide; Hyperoxide (USP/Certified)

Recommended Use Laboratory chemicals

Company Fisher Scientific
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: 703-527-3887

2. HAZARDS IDENTIFICATION

CAUTION!

Emergency Overview

May cause skin, eye, and respiratory tract irritation. The toxicological properties have not been fully investigated.

Appearance Clear

Physical State Liquid

odor slight

Target Organs None known.

Potential Health Effects

Acute Effects

Principle Routes of Exposure

| | |
|-------------------|--|
| Eyes | May cause irritation. |
| Skin | May cause irritation. |
| Inhalation | May cause irritation of respiratory tract. |
| Ingestion | May cause irritation. |

Chronic Effects None known.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions Preexisting eye disorders. Skin disorders.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Haz/Non-haz

| Component | CAS-No | Weight % |
|-------------------|-----------|----------|
| Water | 7732-18-5 | 97 |
| Hydrogen peroxide | 7722-84-1 | 3 |

4. FIRST AID MEASURES

| | |
|---------------------------|---|
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur. |
| Inhalation | Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur. |
| Ingestion | Do not induce vomiting. Obtain medical attention. |
| Notes to Physician | Treat symptomatically. |

5. FIRE-FIGHTING MEASURES

| | |
|---|--|
| Flash Point | No information available. |
| Method | No information available. |
| Autoignition Temperature | No information available. |
| Explosion Limits | |
| Upper | No data available |
| Lower | No data available |
| Suitable Extinguishing Media | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| Unsuitable Extinguishing Media | No information available. |
| Hazardous Combustion Products | No information available. |
| Sensitivity to mechanical impact | No information available. |
| Sensitivity to static discharge | No information available. |

Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition

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.

NFPA **Health 1** **Flammability 1** **Instability 0** **Physical hazards N/A**

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Ensure adequate ventilation. Use personal protective equipment.

Environmental Precautions Should not be released into the environment.

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

7. HANDLING AND STORAGE

Handling Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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

Exposure Guidelines

| Component | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|-------------------|------------|--|--|
| Hydrogen peroxide | TWA: 1 ppm | (Vacated) TWA: 1 ppm (Vacated) TWA: 1.4 mg/m ³ TWA: 1.4 mg/m ³ TWA: 1 ppm | IDLH: 75 ppm TWA: 1.4 mg/m ³ TWA: 1 ppm |

| Component | Quebec | Mexico OEL (TWA) | Ontario TWAEV |
|-------------------|--|--|--|
| Hydrogen peroxide | TWA: 1 ppm TWA: 1.4 mg/m ³ | TWA: 1 ppm TWA: 1.5 mg/m ³ STEL: 3 mg/m ³ STEL: 2 ppm | TWA: 1 ppm TWA: 1.4 mg/m ³ |

NIOSH IDLH: Immediately Dangerous to Life or Health

Personal Protective Equipment

Eye/face Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-------------------------------------|---------------------------|
| Physical State | Liquid |
| Appearance | Clear |
| odor | slight |
| Odor Threshold | No information available. |
| pH | No information available. |
| Vapor Pressure | 23.3 mmHg @ 30°C |
| Vapor Density | > 1.00 |
| Viscosity | No information available. |
| Boiling Point/Range | >100°C / 212°F |
| Melting Point/Range | No information available. |
| Decomposition temperature °C | No information available. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-------------------|---------------------------|
| Flash Point | No information available. |
| Evaporation Rate | No information available. |
| Specific Gravity | 1.00 |
| Solubility | Soluble in water |
| log Pow | No data available |
| Molecular Weight | 34 |
| Molecular Formula | H2 O2 |

10. STABILITY AND REACTIVITY

| | |
|----------------------------------|--|
| Stability | Light sensitive. |
| Conditions to Avoid | Incompatible products. Excess heat. Exposure to light. |
| Incompatible Materials | Powdered metals, Powdered metal salts |
| Hazardous Decomposition Products | oxygen |
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions . | None under normal processing.. |

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|-------------------|-------------------|---|--------------------|
| Hydrogen peroxide | 801 mg/kg (Rat) | 2000 mg/kg (Rabbit) 4060 mg/kg (Rat) | 2 mg/L (Rat) 4 h |

| | |
|--------------------------------------|---------------------------|
| Irritation | No information available. |
| Toxicologically Synergistic Products | No information available. |

Chronic Toxicity

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

| Component | ACGIH | IARC | NTP | OSHA | Mexico |
|-------------------|-------|------------|------------|------------|------------|
| Hydrogen peroxide | A3 | Not listed | Not listed | Not listed | Not listed |

ACGIH: (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)

| | |
|--|---|
| Sensitization | No information available. |
| Mutagenic Effects | No information available. |
| Reproductive Effects | No information available. |
| Developmental Effects | No information available. |
| Teratogenicity | No information available. |
| Other Adverse Effects | See actual entry in RTECS for complete information. |
| Endocrine Disruptor Information | No information available |

12. ECOLOGICAL INFORMATION

Ecotoxicity

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|-------------------|-------------------|-----------------|------------|-------------------|
| Hydrogen peroxide | EC50 2.5 mg/L/72h | Not listed | Not listed | EC50 7.7 mg/L/24h |

| | |
|--------------------------------------|--------------------------|
| Persistence and Degradability | No information available |
| Bioaccumulation/ Accumulation | No information available |
| Mobility | No information available |

| Component | log Pow |
|-----------|---------|
| Water | -1.87 |

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

| | |
|------------------------|---------------|
| <u>DOT</u> | Not regulated |
| <u>TDG</u> | Not regulated |
| <u>IATA</u> | Not regulated |
| <u>IMDG/IMO</u> | Not regulated |

15. REGULATORY INFORMATION

International Inventories

| Component | TSCA | DSL | NDSL | EINECS | ELINCS | NLP | PICCS | ENCS | AICS | CHINA | KECL |
|-------------------|------|-----|------|-----------|--------|-----|-------|------|------|-------|---------------|
| Water | X | X | - | 231-791-2 | - | | X | - | X | X | X |
| Hydrogen peroxide | X | X | - | 231-765-0 | - | | X | X | X | X | KE-20204 X |

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

Not applicable

SARA 311/312 Hazardous Categorization

| | |
|-----------------------------------|----|
| Acute Health Hazard | No |
| Chronic Health Hazard | No |
| Fire Hazard | No |
| Sudden Release of Pressure Hazard | No |
| Reactive Hazard | No |

Clean Water Act

Not applicable

Clean Air Act

Not applicable

OSHA

| Component | Specifically Regulated Chemicals | Highly Hazardous Chemicals |
|-------------------|----------------------------------|----------------------------|
| Hydrogen peroxide | - | TQ: 7500 lb |

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Component | Hazardous Substances RQs | CERCLA EHS RQs |
|-------------------|--------------------------|----------------|
| Hydrogen peroxide | - | 1000 lb |

California Proposition 65

This product does not contain any Proposition 65 chemicals.

State Right-to-Know

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|-------------------|---------------|------------|--------------|----------|--------------|
| Hydrogen peroxide | X | X | X | - | X |

U.S. Department of Transportation

Reportable Quantity (RQ): N
 DOT Marine Pollutant N
 DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product contains the following DHS chemicals:

| Component | DHS Chemical Facility Anti-Terrorism Standard |
|-------------------|---|
| Hydrogen peroxide | 2000 lb STQ (concentration of at least 30%) |

Other International Regulations

Mexico - Grade No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

Non-controlled

| |
|------------------------------|
| 16. OTHER INFORMATION |
|------------------------------|

Prepared By

Regulatory Affairs

16. OTHER INFORMATIONThermo Fisher Scientific
Tel: (412) 490-8929**REVIEWED**

Creation Date 09-Jun-2009

Print Date 26-Sep-2009

Revision Summary "****", and red text indicates revision

DATE: July 10/2012*CRutterford***Disclaimer**

The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of MSDS