

SAFETY DATA SHEET

1 PRODUCT AND COMPANY IDENTIFICATION

GHS Product identifier: Hydrogen Peroxide, 3%

Other means of identification

Product No.: 5241, P006

Intended Use: For Laboratory, Research or Manufacturing Use.

Details of the supplier of the safety data sheet:

Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200
Radnor, PA 19087

Telephone:

Customer Service: 855-282-6867

Contact Person: Product Information Compliance

E-mail: info@avantormaterials.com

Emergency telephone: CHEMTREC: 00801-14-8954 (24/7)

2 HAZARDS IDENTIFICATION

GHS classification:

Health Hazards	Skin Corrosion/Irritation	Category 2
	Serious Eye Damage/Eye Irritation	Category 2A
	Germ Cell Mutagenicity	Category 1B
	Specific Target Organ Toxicity - Repeated Exposure (Oral)	Category 2 ¹

1. Lungs

GHS label elements

Symbol(s):



Signal Words:

Danger

Hazard Statement(s):

Causes skin irritation.
Causes serious eye irritation.
May cause genetic defects.
May cause damage to organs.

Precautionary Statements

Prevention:

Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using this product.

Response:

IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF exposed or concerned: Call a POISON CENTER/doctor.

Storage:

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.

3 COMPOSITION / INFORMATION ON INGREDIENTS

Substance or Preparation:

Chemical name	CAS-No.	Concentration
Hydrogen peroxide	7722-84-1	2.00 - 4.00%
Water	7732-18-5	96.00 - 98.00%

4 FIRST AID MEASURES

General: Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

Inhalation: Move to fresh air. Get medical attention if symptoms occur. If breathing stops, provide artificial respiration.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention immediately.

Skin Contact: Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Ingestion Rinse mouth. Call a POISON CENTER/doctor if you feel unwell.

Likely Acute or Delayed Symptoms/Effects Irritating to eyes, respiratory system and skin.

Notes to the physician: Treat symptomatically. Symptoms may be delayed.

5 FIRE-FIGHTING MEASURES

Extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: None known.

Unusual Fire & Explosion Hazards: Contact with metals may evolve flammable hydrogen gas. Fire may produce irritating, corrosive and/or toxic gases. May intensify fire; oxidizer.

Special fire fighting procedures: Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

Protective Measures: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep unauthorized personnel away. Use personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

- 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.
- Spill Cleanup Methods:** 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.

7 HANDLING AND STORAGE

- Handling:** Use personal protective equipment as required. Do not breathe mist or vapor. Do not taste or swallow. Do not eat, drink or smoke when using the product. Use only with adequate ventilation. Wash hands thoroughly after handling. See Section 8 of the SDS for Personal Protective Equipment. Avoid contact with eyes. Avoid contact with skin. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
- Storage:** Do not store in metal containers. Keep in a cool, well-ventilated place. Store in a dry place. Store locked up.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

- Appropriate Engineering Controls:** 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.

Exposure Limits:

Chemical name	Type	Exposure Limit Values		Source
Hydrogen peroxide	TWA	1 ppm	1.4 mg/m ³	Taiwan. OELs (Standards of Permissible Exposure Limits at Workplace, Notice No. 58463), as amended (12 2003)
	STEL	2 ppm	2.8 mg/m ³	Taiwan. OELs (Standards of Permissible Exposure Limits at Workplace, Notice No. 58463), as amended (06 2014)

Personal protective equipment (ppe):

- Respiratory Protection:** In case of inadequate ventilation use suitable respirator.
- Eye Protection:** Wear safety glasses with side shields (or goggles) and a face shield.
- Hand Protection:** Chemical resistant gloves
- Skin Protection:** Wear suitable protective clothing.
- Hygiene measures:** Provide eyewash station and safety shower. Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Do not eat, drink or smoke when using the product. Wash contaminated clothing before reuse.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state:	Liquid
Form:	Liquid
Color:	Colorless
Odor:	Odorless
Odor Threshold:	No data available.
pH:	No data available.
Freezing point:	0 °C
Boiling Point:	100 °C
Flash Point:	No data available.
Evaporation Rate:	No data available.
Flammability (solid, gas):	No data available.
Flammability Limit - Upper (%)-:	No data available.
Flammability Limit - Lower (%)-:	No data available.
Vapor pressure:	No data available.
Vapor density (air=1):	No data available.
Relative density:	1.01 (20 °C)
Solubility(ies)	
Solubility in Water:	Completely soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Autoignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Viscosity:	No data available.
Explosive properties:	No data available.
Oxidizing properties:	No data available.

10 STABILITY AND REACTIVITY

Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerization does not occur.
Conditions to avoid:	Excessive heat. Contact with incompatible materials.
Incompatible Materials:	Strong oxidizing agents. Organic compounds. Reducing agents.
Hazardous Decomposition Products:	None under normal conditions.

11 TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation:	May be harmful if inhaled. Mist or vapors may cause irritation.
Ingestion:	May be harmful if swallowed. May irritate and cause stomach pain, vomiting and diarrhoea.
Skin Contact:	Causes skin irritation.
Eye contact:	Causes serious eye irritation.

Information on toxicological effects

Acute toxicity

Oral

Product: ATEmix (Rat): 17,342.5 mg/kg

Dermal

Product: ATEmix (Rabbit): 101.5 g/kg

Inhalation

Product: No data available.

Specified substance(s)

Hydrogen peroxide	LOAEL (Rat, 4 h): 2 mg/l LC 50 (Rat, 4 h): > 170 mg/m ³
Water	Vapour: LC 50 (Rat, 4 h): > 50 mg/l

Repeated dose toxicity

Product: No data available.

Skin Corrosion/Irritation:

Product: Causes skin irritation.

Serious Eye Damage/Eye

Irritation:

Product: Causes serious eye irritation.

Respiratory or Skin

Sensitization:

Product: Not a skin nor a respiratory sensitizer.

Germ Cell Mutagenicity

In vitro

Product: May cause genetic defects.

In vivo

Product: May cause genetic defects.

Carcinogenicity

Product: This substance has no evidence of carcinogenic properties.

Reproductive toxicity

Product: No components toxic to reproduction

Specific Target Organ Toxicity - Single Exposure

Product: Oral: Lungs

Specified substance(s)

Hydrogen peroxide	No data available.
Water	No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Specified substance(s)

Hydrogen peroxide	No data available.
Water	No data available.

Aspiration Hazard

Product: Not classified

Other adverse effects:

None known.

12 ECOLOGICAL INFORMATION

General information: Not applicable

Ecotoxicity

Acute toxicity

Fish

Product: No data available.

Specified substance(s):

Hydrogen peroxide
NOAEL (Pimephales promelas, 96 h): 5 mg/l
LC 50 (Pimephales promelas, 96 h): 16.4 mg/l
LC 50 (Ictalurus punctatus, 96 h): 37.4 mg/l
Water
LC 50 (Fish, 96 h): > 100 mg/l

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Hydrogen peroxide
NOAEL (Daphnia pulex, 48 h): 1 mg/l
LC 50 (Daphnia pulex, 48 h): 2.4 mg/l
Water
No data available.

Chronic Toxicity

Fish

Product: No data available.

Specified substance(s):

Hydrogen peroxide
No data available.
Water
NOEC (Fish): > 1 mg/l

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Hydrogen peroxide
LOAEL (Daphnia magna, 21 d): 1.25 mg/l
NOAEL (Daphnia magna, 21 d): 0.63 mg/l
Water
No data available.

Toxicity to Aquatic Plants

Product: No data available.

Specified substance(s):

Hydrogen peroxide
No data available.
Water
No data available.

Persistence and Degradability

Biodegradation

Product: There are no data on the degradability of this product.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Product: No data available on bioaccumulation.

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

Hydrogen peroxide
No data available.
Water
No data available.

Results of PBT and vPvB assessment: Not available.

Other adverse effects: The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

13 Disposal considerations

Disposal methods: Discharge, treatment, or disposal may be subject to national, state, or local laws. 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.

14 TRANSPORT INFORMATION

IMDG - International Maritime Dangerous Goods Code

Not regulated.

IATA

Not regulated.

15 REGULATORY INFORMATION

Occupational Safety and Health Act
Regulations for the Labeling and Hazard Communication of Hazardous Chemicals
Regulations Governing Road Traffic Safety
Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste
Standards of Permissible Exposure Limits at Job Site

16 OTHER INFORMATION

Inventory Status

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
Japan ISHL Listing:	Not in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Mexico INSQ:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory

Information Sources: 1. Sources of information used in preparing this SDS included one or more of the following: results from in house or supplier toxicology studies, information from the Toxicology Data Network (TOXNET), European Chemical Agency (ECHA) substance dossiers, IARC Monographs, US National Toxicology Program data, the Agency for Toxic Substances and Disease Registry, other manufacturer's SDSs and other sources, as appropriate.

Revision Information: Not relevant.

Issue Date: 03-09-2020

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