

# SAFETY DATA SHEET

According to US Regulation 29 CFR 1910.1200 (HazCom 2012)

## 1. Identification

**Product identifier:** Hydrogen Peroxide, 3%

### Other means of identification

**Product No.:** 5241, P006

### Recommended restrictions

**Recommended use:** For Laboratory, Research or Manufacturing Use.

**Restrictions on use:** Not determined.

### Details of the supplier of the safety data sheet

**Company Name:** Avantor Performance Materials, LLC  
**Address:** 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 number:

CHEMTREC: 1-800-424-9300 within US and Canada (24 hrs/day, 7 days/week)

## 2. Hazard(s) identification

### Hazard Classification

#### Health Hazards

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Germ Cell Mutagenicity	Category 1B
Specific Target Organ Toxicity - Single Exposure (Oral)	Category 2 <sup>1</sup>

#### Target Organs

1. Lungs

#### Unknown toxicity - Health

Acute toxicity, oral	0 %
Acute toxicity, dermal	0 %
Acute toxicity, inhalation, vapor	2 %
Acute toxicity, inhalation, dust or mist	2 %

### Label Elements

**Hazard Symbol:**



**Signal Word:** Danger

**Hazard Statement:** 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.

**Hazard(s) not otherwise classified (HNOC):** None.

**3. Composition/information on ingredients**

**Mixtures**

Chemical Identity	CAS number	Content in percent (%)*
Hydrogen peroxide	7722-84-1	2 - 4%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**4. First-aid measures**

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

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

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

**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.

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

**Most important symptoms/effects, acute and delayed**

**Symptoms:** Irritating to eyes, respiratory system and skin.  
**Hazards:** None known.

**Indication of immediate medical attention and special treatment needed**

**Treatment:** Treat symptomatically. Symptoms may be delayed.

**5. Fire-fighting measures**

**General Fire Hazards:** In case of fire and/or explosion do not breathe fumes.

**Suitable (and unsuitable) extinguishing media**

**Suitable extinguishing media:** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media:** None known.

**Specific hazards arising from the chemical:** Contact with metals may evolve flammable hydrogen gas. Fire may produce irritating, corrosive and/or toxic gases. May intensify fire; oxidizer.

**Special protective equipment and precautions for firefighters**

**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.

**Special protective equipment for fire-fighters:** 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, protective equipment and emergency procedures:** 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.

**Methods and material for containment and cleaning up:** 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.

**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.

**7. Handling and storage**

**Precautions for safe 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.

**Conditions for safe storage, including any incompatibilities:** 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**

**Control Parameters**

**Occupational Exposure Limits**

Chemical Identity	Type	Exposure Limit Values	Source
Hydrogen peroxide	TWA	1 ppm	US. ACGIH Threshold Limit Values (2011)
	REL	1 ppm 1.4 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	1 ppm 1.4 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	1 ppm 1.4 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	1 ppm 1.4 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	ST ESL	Health 14 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL	Health 10 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL	Health 1.4 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL	Health 1 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
Hydrogen peroxide - as H2O2	TWA PEL	1 ppm 1.4 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)

**Appropriate Engineering Controls** No data available.

**Individual protection measures, such as personal protective equipment**

**General information:** 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.

**Eye/face protection:** Wear safety glasses with side shields (or goggles) and a face shield.

**Skin Protection**  
**Hand Protection:** Chemical resistant gloves

**Other:** Wear suitable protective clothing.

<b>Respiratory Protection:</b>	In case of inadequate ventilation use suitable respirator.
<b>Hygiene measures:</b>	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

<b>Physical state:</b>	Liquid
<b>Form:</b>	Liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	No data available.
<b>Melting point/freezing point:</b>	0 °C
<b>Initial boiling point and boiling range:</b>	100 °C
<b>Flash Point:</b>	No data available.
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	No data available.
<b>Vapor density:</b>	No data available.
<b>Density:</b>	1.01 g/ml (20 °C)
<b>Relative density:</b>	1.01 (20 °C)
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	Completely soluble
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.

## 10. Stability and reactivity

<b>Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid:</b>	Excessive heat. Contact with incompatible materials.
<b>Incompatible Materials:</b>	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.

**Skin Contact:** Causes skin irritation.

**Eye contact:** Causes serious eye irritation.

**Ingestion:** May be harmful if swallowed. May irritate and cause stomach pain, vomiting and diarrhoea.

### Information on toxicological effects

#### Acute toxicity (list all possible routes of exposure)

**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<sup>3</sup>

**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.

**Carcinogenicity**  
**Product:** This substance has no evidence of carcinogenic properties.

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**  
No carcinogenic components identified

**US. National Toxicology Program (NTP) Report on Carcinogens:**  
No carcinogenic components identified

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**  
No carcinogenic components identified

**Germ Cell Mutagenicity**

**In vitro**  
**Product:** May cause genetic defects.

**In vivo**  
**Product:** May cause genetic defects.

**Reproductive toxicity**

**Product:** No components toxic to reproduction

**Specific Target Organ Toxicity - Single Exposure**

**Product:** Oral: Lungs

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** No data available.

**Target Organs**

Specific Target Organ Toxicity - Single Exposure: Lungs

**Aspiration Hazard**

**Product:** Not classified

**Other effects:** None known.

<b>12. Ecological information</b>
-----------------------------------

**Ecotoxicity:**

**Acute hazards to the aquatic environment:**

**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

**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

**Chronic hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**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

**Toxicity to Aquatic Plants**  
Product: 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**  
**Bioconcentration Factor (BCF)**  
Product: No data available on bioaccumulation.

**Partition Coefficient n-octanol / water (log Kow)**  
Product: No data available.

**Mobility in soil:** No data available.

**Known or predicted distribution to environmental compartments**  
Hydrogen peroxide No data 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 instructions:** 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.

**Contaminated Packaging:** Since emptied containers retain product residue, follow label warnings even after container is emptied.

**14. Transport information**

**DOT**  
Not regulated.

**IMDG**  
Not regulated.

**IATA**  
Not regulated.

**15. Regulatory information**

**US Federal Regulations**  
**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**  
None present or none present in regulated quantities.



**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

None present or none present in regulated quantities.

**CERCLA Hazardous Substance List (40 CFR 302.4):**

None present or none present in regulated quantities.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**

- Skin Corrosion or Irritation
- Serious eye damage or eye irritation
- Germ Cell Mutagenicity
- Specific target organ toxicity (single or repeated exposure)

**SARA 302 Extremely Hazardous Substance**

<u>Chemical Identity</u>	<u>Reportable quantity</u>	<u>Threshold Planning Quantity</u>
Hydrogen peroxide	1000 lbs.	1000 lbs.

**SARA 304 Emergency Release Notification**

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Hydrogen peroxide	

**SARA 311/312 Hazardous Chemical**

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Hydrogen peroxide	500 lbs.
Hydrogen peroxide	10000 lbs.

**SARA 313 (TRI Reporting)**

None present or none present in regulated quantities.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

None present or none present in regulated quantities.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3):**

None present or none present in regulated quantities.

**US State Regulations**

**US. California Proposition 65**

No ingredient requiring a warning under CA Prop 65.

**US. New Jersey Worker and Community Right-to-Know Act**

<u>Chemical Identity</u>
Hydrogen peroxide

**US. Massachusetts RTK - Substance List**

<u>Chemical Identity</u>
Hydrogen peroxide

**US. Pennsylvania RTK - Hazardous Substances**

<u>Chemical Identity</u>
Hydrogen peroxide

**US. Rhode Island RTK**

<u>Chemical Identity</u>
Hydrogen peroxide

**International regulations**

**Montreal protocol**

Not applicable

**Stockholm convention**

Not applicable

**Rotterdam convention**

Not applicable

**Kyoto protocol**

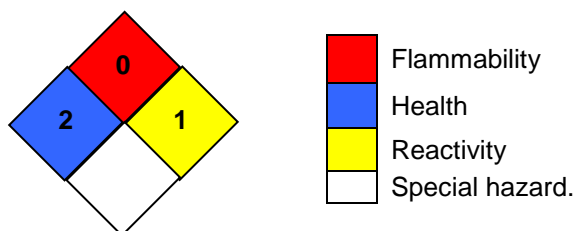
Not applicable

**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

**16. Other information, including date of preparation or last revision**

**NFPA Hazard ID**



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

**Issue Date:** 03-09-2020

**Revision Information:** Not relevant.

**Version #:** 1.1

**Source of information:** 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.

**Further Information:** No data available.

**Disclaimer:** The information provided in this Safety Data Sheet (SDS) was prepared based on data believed to be accurate as of the date of this SDS. TO THE GREATEST EXTENT PERMITTED BY LAW, AVANTOR PERFORMANCE MATERIALS (“AVANTOR”) EXPRESSLY DISCLAIMS ANY AND ALL REPRESENTATIONS AND WARRANTIES REGARDING THE INFORMATION CONTAINED HEREIN INCLUDING, WITHOUT LIMITATION, AS TO ACCURACY, COMPLETENESS, FITNESS FOR PURPOSE OR USE, MERCHANTABILITY, NON-INFRINGEMENT, PERFORMANCE, SAFETY, SUITABILITY AND STABILITY. This SDS is intended as a guide to the appropriate use, handling, storage and disposal of the product to which it relates by properly trained personnel, and is not intended to be comprehensive. Users of Avantor’s products are advised to perform their own tests and to exercise their own judgment to determine the safety, suitability and appropriate use, handling, storage and disposal of each product and product combination for their own purposes and uses. TO THE GREATEST EXTENT PERMITTED BY LAW, AVANTOR DISCLAIMS LIABILITY FOR, AND BY USING AVANTOR’S PRODUCTS PURCHASER AGREES THAT UNDER NO CIRCUMSTANCES SHALL AVANTOR BE LIABLE FOR, SPECIAL, INDIRECT, INCIDENTAL , PUNITIVE OR CONSEQUENTIAL DAMAGES OF ANY TYPE OR KIND, INCLUDING WITHOUT LIMITATION, FOR LOSS OF PROFITS, REPUTATIONAL DAMAGE, PRODUCT RECALL OR BUSINESS INTERRUPTION.