

Material Safety Data Sheet

Date Printed: 15/DEC/2004

Date Updated: 17/MAR/2004

Version 1.3

According to 91/155/EEC

1 - Product and Company Information

Product Name HYDROGEN PEROXIDE, 50 WT. % SOLUTION IN WATER
Product Number 516813
Company Sigma-Aldrich Pte Ltd
#08-01 Citilink Warehouse
Singapore 118529
Singapore
Technical Phone # 65 271 1089
Fax 65 271 1571

2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
HYDROGEN PEROXIDE, 40-60% SOLUTION IN WATER	7722-84-1	231-765-0	008-003-00-9

Formula H2O2
Molecular Weight 34.02 AMU
Synonyms Hydrogen peroxide, solution, 35%

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Causes burns.

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician. Do not induce vomiting.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.
Explosion Hazards: Container explosion may occur under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL
Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Cover with dry lime or soda ash, pick up, keep in a closed container, and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed.
Unsuitable: Do not store near, nor allow contact with, clothing and other combustible material.
Store at 2-8°C

SPECIAL REQUIREMENTS: Store under inert gas. May develop pressure. Open carefully. Light sensitive.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Use only in a chemical fume hood.

GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Discard contaminated shoes. Wash thoroughly after handling.

EXPOSURE LIMITS - GERMANY

Source	Type	Value
TRGS 900	OEL	1.4 mg/m ³ 1 ppm

Remarks: =1=

EXPOSURE LIMITS - NORWAY

Source	Type	Value
	OEL	1.4 mg/m ³ 1 ppm

EXPOSURE LIMITS - SWEDEN

Source	Type	Value
	LLV (Level)	1.4 mg/m3 1 ppm

EXPOSURE LIMITS - SWITZERLAND

Source	Type	Value
OEL	OEL	1.4 mg/m3 1 ppm

EXPOSURE LIMITS - UNITED KINGDOM

Source	Type	Value
OEL	OEL	1.4 mg/m3 1 ppm
OEL	STEL	2.8 mg/m3 2 ppm

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.
 Hand Protection: Compatible chemical-resistant gloves.
 Eye Protection: Chemical safety goggles.
 Special Protective Measures: Faceshield (8-inch minimum).

9 - Physical and Chemical Properties

Appearance	Physical State: Clear liquid Color: Colorless	
Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	126 °C	760 mmHg
MP/MP Range	-40 °C	
Flash Point	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	23.3 mmHg	30 °C
SG/Density	1.11 g/cm3	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	1 g/l	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

10 - Stability and Reactivity

STABILITY

Conditions to Avoid: Light.
 Materials to Avoid: Brass Copper, Copper alloys, Finely powdered metals, Galvanized iron Iron and iron salts.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Oxygen.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: MX0899500

SIGNS AND SYMPTOMS OF EXPOSURE

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

ROUTE OF EXPOSURE

Skin Contact: Causes burns.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: Causes burns.
Inhalation: Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. May be harmful if inhaled.
Ingestion: May be harmful if swallowed.

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 2014
Class: 5.1
PG: II
Proper Shipping Name: Hydrogen peroxide, aqueous solution

IMDG

UN#: 2014
Class: 5.1
PG: II
Subrisk: 8
Proper Shipping Name: Hydrogen peroxide, aqueous solution
Marine Pollutant: No
Severe Marine Pollutant: No

IATA

UN#: 2014

Class: 5.1
PG: II
Subrisk: 8
Proper Shipping Name: Hydrogen peroxide, aqueous
solution
Inhalation Packing Group I: No

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 008-003-00-9

NOTA: B

INDICATION OF DANGER: C

Corrosive.

R-PHRASES: 34

Causes burns.

S-PHRASES: 28 36/39 45

After contact with skin, wash immediately with plenty of water.

Wear suitable protective clothing and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

COUNTRY SPECIFIC INFORMATION

Germany

WGK: 1

SWITZERLAND

SWISS POISON CLASS: 3

16 - Other Information

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

DISCLAIMER

For R&D use only. Not for drug, household or other uses.