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**SIGMA-ALDRICH**

## Material Safety Data Sheet

Date Printed: 03/11/2005  
Date Updated: 02/09/2005  
Version 1.0

### Section 1 - Product and Company Information

<b>Product Name</b>	Hydrogen peroxide solution, 30% (w/w)		
<b>Product Number</b>	H1009		
<b>Brand</b>	Sigma Chemical		
<b>Company</b>	Sigma-Aldrich		
<b>Street Address</b>	3050 Spruce Street		
<b>City, State, Zip, Country</b>	SAINT LOUIS, MO 63103 US		
<b>Technical Phone:</b>	314 771 5765	<b>Emergency Phone:</b>	414 273 3850 Ext. 5996
<b>Fax:</b>	800 325 5052		

### Section 2 - Composition/Information on Ingredient

<u>Substance Name</u>	<u>CAS #</u>	<u>SARA 313</u>	<u>EC no</u>	<u>Annex I Index Number</u>
HYDROGEN PEROXIDE, 30% SOLUTION	7722-84-1	No	231-765-0	

  

<u>Ingredient Name</u>	<u>CAS #</u>	<u>Percent</u>	<u>SARA 313</u>
HYDROGEN PEROXIDE	7722-84-1	30.000 %	Yes
WATER	7732-18-5	70.000 %	No

  

<b>Formula</b>	H2O2
<b>Synonyms</b>	Albone 35, Albone 50, Albone 70, Albone 35CG, Albone 50CG, Albone 70CG, Hydrogen peroxide, solution, 30%, Interlox, Kastone, Perone 30, Perone 35, Perone 50

### Section 3 - Hazards Identification

**Emergency Overview**  
Harmful.  
Harmful if swallowed. Risk of serious damage to eyes.  
Possible Carcinogen (US). Target organ(s): Eyes. Respiratory system.

**HMS Rating**  
Health: 3\*      Flammability: 0      Reactivity: 0

**NFPA Rating**  
Health: 3      Flammability: 0      Reactivity: 0

\*additional chronic hazards present.  
For additional information on toxicity, please refer to Section 11.

### Section 4 - First Aid Measures

**Oral Exposure**  
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

**Inhalation Exposure**  
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

#### Dermal Exposure

In case of contact, immediately wash skin with soap and copious amounts of water.

#### Eye Exposure

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.

### Section 5 - Fire Fighting Measures

**Autoignition Temp:** N/A

#### Extinguishing Media

**Suitable**  
Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

#### Firefighting

##### Protective Equipment

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

##### Specific Hazard(s)

Emits toxic fumes under fire conditions.

### Section 6 - Accidental Release Measures

#### Procedure 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

Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

### Section 7 - Handling and Storage

#### Handling

##### User Exposure

Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

#### Storage

##### Suitable

Keep tightly closed. Store at 2-8°C

### Section 8 - Exposure Controls / PPE

#### Engineering Controls

Safety shower and eye bath. Mechanical exhaust required.

#### Personal Protective Equipment

##### Respiratory

Government approved respirator.

##### Hand

Compatible chemical-resistant gloves.

##### Eye

Chemical safety goggles.

**General Hygiene Measures**  
Wash thoroughly after handling.

**Exposure Limits, RTECS**

Country	Source	Type	Value
USA	MSHA Standard-air	TWA	1 PPM (1.4 MG/M3)

**Section 9 - Physical/Chemical Properties**

Appearance	Color
Physical State Clear liquid	Colorless

Molecular Weight:	N/A
pH	N/A
BP/BP Range	N/A
MP/MP Range	N/A
Freezing Point	N/A
Vapor Pressure	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
SG/Density	1.11 g/cm3
Bulk Density	N/A
Odor Threshold	N/A
Volatile%	N/A
VOC Content	N/A
Water Content	N/A
Solvent Content	N/A
Evaporation Rate	N/A
Viscosity	N/A
Partition Coefficient	N/A
Decomposition Temp.	N/A
Flash Point °F	N/A
Flash Point °C	N/A
Explosion Limits	N/A

Flammability	N/A
Autoignition Temp	N/A
Solubility	N/A

N/A = not available

**Section 10 - Stability and Reactivity**

**Stability**  
Stable  
Stable.  
**Materials to Avoid**  
Strong oxidizing agents.

**Hazardous Decomposition Products**  
Hazardous Decomposition Products

**Hazardous Polymerization**  
**Hazardous Polymerization**  
Will not occur.

**Section 11 - Toxicological Information**

**Route of Exposure**

**Skin Contact**

May cause skin irritation.

**Skin Absorption**

May be harmful if absorbed through the skin.

**Eye Contact**

Causes severe eye irritation.

**Inhalation**

May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

**Ingestion**

Harmful if swallowed.

**Target Organ(s) or System(s)**

Eyes. Skin. Respiratory system.

**Signs and Symptoms of Exposure**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**RTECS Number:** MX0899000

**Toxicity Data**

Oral - Woman: 2.626 mg/kg (LDLO)

Remarks: Behavioral:Coma.  
Lungs, Thorax, or Respiration:Cyanosis.  
Gastrointestinal:Nausea or vomiting.

Oral - Man: 1429 mg/kg (LDLO)

Remarks: Behavioral:Coma.  
Gastrointestinal:Changes in structure or function of esophagus.  
Gastrointestinal:Nausea or vomiting.

Skin - Rat: 3000 mg/kg (LD50)

Intravenous - Mouse: >50 GM/KG (LD50)

Oral - Rabbit: 820 mg/kg (LD50)

Remarks: Gastrointestinal:Peritonitis.  
Blood:Pigmented or nucleated red blood cells.  
Blood:Changes in leukocyte (WBC) count.

**Chronic Exposure - Carcinogen**

Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Mouse - Oral: 622 GM/KG 2Y C

Result: Tumorigenic:Carcinogenic by RTECS criteria. Gastrointestinal:Tumors.

Mouse - Oral: 155 GM/KG 2Y C

Result: Tumorigenic:Carcinogenic by RTECS criteria. Gastrointestinal:Tumors.

**IARC Carcinogen List**

Rating  
Group 3

**ACGIH Carcinogen List**

Rating  
A3

**Chronic Exposure - Mutagen**

<u>Species</u>	<u>Dose</u>	<u>Cell Type</u>	<u>Mutation test</u>
Human	9 UMOL/L	lymphocyte	DNA damage
Human	50 UMOL/L	Embryo	Other mutation test systems
Human	20 UMOL/L	Embryo	Cytogenetic analysis
Rat	50 UMOL/L	lymphocyte	DNA damage
Hamster	250 UMOL/L	ovary	DNA inhibition
Hamster	60 UMOL/L	ovary	Cytogenetic analysis
Hamster	40 UMOL/L	ovary	Sister chromatid exchange
Hamster	1 MMOL/L	lung	Mutation in mammalian somatic cells.

**Section 12 - Ecological Information**

No data available.

**Section 13 - Disposal Considerations****Appropriate Method of Disposal of Substance or Preparation**

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.

**Section 14 - Transport Information**

**DOT**  
**Proper Shipping Name:** Hydrogen peroxide, aqueous solutions [with not less than 20 percent but not more than 40 percent hydrogen peroxide (stabilized as necessary)]  
**UN#:** 2014  
**Class:** 5.1  
**Packing Group:** Packing Group II  
**Hazard Label:** Oxidizer  
**Hazard Label:** Corrosive  
**PIH:** Not PIH

**IATA**  
**Proper Shipping Name:** Hydrogen peroxide, aqueous solution  
**IATA UN Number:** 2014  
**Hazard Class:** 5.1  
**Packing Group:** II

**Section 15 - Regulatory Information****EU Additional Classification**

**Symbol of Danger:** Xn  
**Indication of Danger**  
Harmful.

**Risk Statements** R: 22 41  
Harmful if swallowed. Risk of serious damage to eyes.

**Safety Statements** S: 26 39  
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear eye/face protection.

**US Classification and Label Text**

**Indication of Danger**  
Harmful.

**Risk Statements**  
Harmful if swallowed. Risk of serious damage to eyes.

**Safety Statements**  
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear eye/face protection.

**US Statements**

Possible Carcinogen (US). Target organ(s): Eyes. Respiratory system.

**United States Regulatory Information**

**SARA Listed:** No

**TSCA Inventory Item:** Yes

**Canada Regulatory Information****WHMIS Classification**

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

**DSL:** Yes  
**NDSL:** No

**Section 16 - Other Information****Disclaimer**

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

**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 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.