

## SAFETY DATA SHEET

Version 3.12  
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### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Hydrogen peroxide solution

Product Number : 323381

Brand : Sigma-Aldrich

Product Use : For laboratory research purposes.

Supplier : Sigma-Aldrich Canada Co.  
 2149 Winston Park Drive  
 OAKVILLE ON L6H 6J8  
 CANADA

Manufacturer : Sigma-Aldrich Corporation  
 3050 Spruce St.  
 St. Louis, Missouri 63103  
 USA

Telephone : +1 9058299500

Fax : +1 9058299292

Emergency Phone # (For both supplier and manufacturer) : +1-703-527-3887 (CHEMTREC)

Preparation Information : Sigma-Aldrich Corporation  
 Product Safety - Americas Region  
 1-800-521-8956

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

##### Target Organs

Eyes, Skin, Respiratory system

##### WHMIS Classification

D2B	Toxic Material Causing Other Toxic Effects	Moderate respiratory irritant
E	Corrosive Material	Severe eye irritant
		Corrosive to skin

##### GHS Classification

Skin corrosion/irritation (Category 2)  
 Serious eye damage/eye irritation (Category 1)

##### GHS Label elements, including precautionary statements

Pictogram



Signal word : Danger

Hazard statement(s)

H315 : Causes skin irritation.  
 H318 : Causes serious eye damage.

Precautionary statement(s)

P264 : Wash skin thoroughly after handling.  
 P280 : Wear protective gloves/ eye protection/ face protection.  
 P302 + P352 : IF ON SKIN: Wash with plenty of water.  
 P305 + P351 + P338 + P310 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.  
 P332 + P313 : If skin irritation occurs: Get medical advice/ attention.  
 P362 + P364 : Take off contaminated clothing and wash it before reuse.

**HMIS Classification**

Health hazard: 3  
Chronic Health Hazard: \*  
Flammability: 0  
Physical hazards: 3

**Potential Health Effects**

**Inhalation** May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Causes respiratory tract irritation.

**Skin** Harmful if absorbed through skin. Causes skin burns. Causes skin irritation.

**Eyes** Causes eye burns. Causes eye irritation.

**Ingestion** Harmful if swallowed.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula : H<sub>2</sub>O<sub>2</sub>

CAS-No.	EC-No.	Index-No.	Concentration
<b>Hydrogen peroxide</b>			
7722-84-1	231-765-0	008-003-00-9	< 5 %
<b>Water</b>			
7732-18-5	231-791-2	-	>= 95 %
<b>Acetanilide</b>			
103-84-4	203-150-7	-	>= 150 - <= 250 ppm

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**4. FIRST AID MEASURES****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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**5. FIREFIGHTING MEASURES****Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**Hazardous combustion products****Explosion data - sensitivity to mechanical impact**

No data available

**Explosion data - sensitivity to static discharge**

No data available

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**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions**

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

**Environmental precautions**

Do not let product enter drains.

**Methods and materials for containment and cleaning up**

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

**7. HANDLING AND STORAGE****Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

**Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Light sensitive.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Basis
Hydrogen peroxide	7722-84-1	TWA	1.000000 ppm 1.400000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required			
		TWA	1.000000 ppm	Canada. British Columbia OEL
		TWAEV	1.000000 ppm 1.400000 mg/m3	Canada. Ontario OELs
		TWAEV	1.000000 ppm 1.400000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWA	1 ppm 1.4 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required			
		TWA	1 ppm	Canada. British Columbia OEL
		TWAEV	1 ppm 1.4 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWA	1.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		TWA	1 ppm	USA. ACGIH Threshold Limit Values (TLV)

## Personal protective equipment

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

### Eye protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

### Skin and body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### Specific engineering controls

Use mechanical exhaust or laboratory fumehood to avoid exposure.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form	clear, liquid
Colour	colourless

### Safety data

pH	No data available
Melting point/freezing point	No data available
Boiling point	No data available
Flash point	No data available
Ignition temperature	No data available
Auto-ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	31.1 hPa (23.3 mmHg) at 30 °C (86 °F)
Density	1.000 g/cm <sup>3</sup>
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Relative vapour density	No data available
Odour	No data available
Odour Threshold	No data available
Evaporation rate	No data available

## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

No data available

### Materials to avoid

Zinc, Powdered metals, Iron, Copper, Nickel, Brass, Iron and iron salts.

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.

Contains the following stabiliser(s):

Acetanilide ( $\geq 150$  -  $\leq 250$  ppm)

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Oral LD50

No data available

#### Inhalation LC50

No data available

#### Dermal LD50

No data available

#### Other information on acute toxicity

No data available

### Skin corrosion/irritation

No data available

### Serious eye damage/eye irritation

Eyes: No data available

### Respiratory or skin sensitisation

No data available

### Germ cell mutagenicity

No data available

### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### Reproductive toxicity

No data available

### Teratogenicity

No data available

### Specific target organ toxicity - single exposure (Globally Harmonized System)

No data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

No data available

**Aspiration hazard**

No data available

**Potential health effects**

<b>Inhalation</b>	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Causes respiratory tract irritation.
<b>Ingestion</b>	Harmful if swallowed.
<b>Skin</b>	Harmful if absorbed through skin. Causes skin burns. Causes skin irritation.
<b>Eyes</b>	Causes eye burns. Causes eye irritation.

**Signs and Symptoms of Exposure**

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

**Synergistic effects**

No data available

**Additional Information**

RTECS: Not available

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**12. ECOLOGICAL INFORMATION****Toxicity**

No data available

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**PBT and vPvB assessment**

No data available

**Other adverse effects**

No data available

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**13. DISPOSAL CONSIDERATIONS****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. 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.

**Contaminated packaging**

Dispose of as unused product.

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**14. TRANSPORT INFORMATION****DOT (US)**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

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**15. REGULATORY INFORMATION**

**WHMIS Classification**

D2B	Toxic Material Causing Other Toxic Effects	Moderate respiratory irritant
E	Corrosive Material	Severe eye irritant
		Corrosive to skin

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

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**16. OTHER INFORMATION****Text of H-code(s) and R-phrase(s) mentioned in Section 3****Further information**

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