

Material Safety Data Sheet

MSDS 09461-0-001

Revision: C
Product code: Hydrogen Peroxide Solution
Issue date: 8/11/05

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Supplier:

Advanced Sterilization Products
33 Technology Drive
Irvine, CA 92618

Customer service telephone: 1-800-755-5900
Emergency telephone number: 1-877-208-6653 - 24 hrs
Product name: Hydrogen Peroxide Solution
Product code: ASPHYDPEROX

2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Weight %	J&J - OEL Data (TWA - 8 hr)	J&J - OEL Data (STEL):	J&J - OEL Data (Ceiling Limit Value):	J&J - PBOEL
HYDROGEN PEROXIDE SOLUTION	7722-84-1	>50	Not Determined	Not Determined	Not Determined	Not Determined

3. HAZARDS IDENTIFICATION

Emergency overview: Harmful by inhalation, in contact with skin and if swallowed.
Toxic: danger of very serious irreversible effects in contact with skin.
This product is not flammable, but it is an oxidizing material and can increase risk of fire or the intensity of a fire.
Contact with combustible material may cause fire.

Properties affecting health: Harmful by inhalation, in contact with the eyes and skin, and if swallowed.

Principle routes of exposure:

Oral: Harmful if swallowed.
Eye contact: Severe irritant / corrosive to the eye.
Skin contact: Severe irritant / corrosive to the skin.
Ingestion: Harmful if swallowed. Severely irritating / corrosive to the gastrointestinal tract.
Inhalation: Not a likely route of exposure. Inhalation of mist or vapors may be severely irritating to the nose, throat and lungs

Physico-chemical properties: Hydrogen peroxide is an oxidizer

Hazard information:

Target organ effects: Eyes, skin, lungs, respiratory system.
Reproductive effects: This material is not reported to cause reproductive effects in humans

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Mutagenic effects:
Sensitization:

This product is not know to produce mutagenic effects in humans
Non-sensitizing.

Carcinogenicity rating:

Components	CAS Number	J & J:	NTP:	IARC:	California Proposition 65 List:
HYDROGEN PEROXIDE SOLUTION	7722-84-1	Not Determined	Not Determined	Listed.	Not Determined

Signs and symptoms:

Irritating / corrosive to the eyes, skin, nose, throat and lungs.

Medical conditions aggravated by exposure:

Dermatitis, respiratory irritation , eye and skin irritation..

4. FIRST AID MEASURES

Eye contact:

In the case of contact with eyes, rinse immediately with plenty of water for 15 minutes and seek medical attention.

Ingestion:

Do not induce vomiting. Call a physician or Poison Control Center immediately

Inhalation:

Move to fresh air immediately. If experiencing difficulty breathing, seek medical attention.

Skin contact:

After contact with skin, wash immediately with plenty of water. Immediately remove contaminated clothing and shoes. Wash contaminated clothing before reuse. If skin irritation persists, contact a physician.

Protection of first-aiders:

Wear chemical resistant gloves and eye protection

Notes to physician:

Treat symptoms and eliminate overexposure

5. FIRE-FIGHTING MEASURES

Flash point (°F):

>200

Flash point (°C):

>93.4

Autoignition temperature:

Non-combustible

Flammable limits in air - lower (%):

Non-combustible

NFPA rating:

Health: 3 flammability: 0 reactivity: 1 special: ox

HMIS rating:

Health: 3 flammability: 0 physical hazard: 1

Fire fighting information:

Suitable extinguishing media:

Preferably water or water fog. Carbon dioxide and dry chemical may also be used.

Extinguishing media which must not be used for safety reasons:

None.

Specific methods:

None.

Special protective equipment for firefighters:

Wear self-contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products:

Product is non-combustible. On decomposition H₂O₂ releases oxygen which may intensify fire.

Explosivity:

None.

Explosion limits:

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lower:
upper:

None.
None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Responders should wear gloves, goggles and suitable body protection. Where there is a risk of product contact with shoes, chemical resistant shoe coverings are recommended.
Environmental precautions:	Do not wash down sewers or waterways. Do not allow material to contaminate ground water system.
Methods for cleaning up:	Small spills can be cleaned up using a damp sponge or an inert absorbent . For large spills, clear the affected area. Place all spill residue and disposable clean-up materials in an appropriate container and seal for disposal. Keep away from combustible material.

7. HANDLING AND STORAGE

Handling:

Technical measures/precautions:	Ensure adequate ventilation. If existing ventilation is not adequate, product should be used with a local exhaust hood, or in a ductless fume hood/portable ventilation system. Provide eye baths, washing facilities, and safety showers.
Safe handling advice:	Wear appropriate personal protection, including chemical resistant gloves and clothing, and eye protection. Keep away from combustible material.

Storage:

Technical measures/storage conditions:	Store away from incompatible materials. Store in a well-ventilated location and in a temperature controlled area, at 15-30°C (59-86°F). The solution should be stored up right and in its original container until time of use to avoid any contamination. Store containers in a cool, dry location, away from direct sunlight, heat, spark flame or other sources of intense heat.
Incompatible products:	Avoid excessive heat and contamination. Contamination may cause decomposition and generation of oxygen gas which could result in high pressures and possible rupture.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls:	Ensure adequate ventilation.
Eye protection:	For routine use, wear approved chemical splash goggles. Where there is risk of product splashing into eyes, an independent face shield must be worn.
Hand protection:	Wear chemical resistant gloves. Gloves should be changed frequently during use of product.
Skin and body protection	Wear chemical resistant lab coat.
Respiratory protection:	None normally required for routine use, unless sprays or mists are generated during use.
Other/general protection:	None required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Colorless
pH:	< 3
Odor:	Odorless
Molecular weight:	34.0
Boiling temperature (°F):	244
Boiling temperature (°C):	118
Melting point/range (°F):	-67.9
Melting point/range (°C):	-55.5
Freezing point/range (°C):	-55.5
Freezing point/range (°F):	-67.9
Specific gravity:	1.2361
Vapor pressure:	14.8 mm Hg
Water solubility:	Soluble
Viscosity:	1.207
Partition coefficient (n-octanol/water):	Not established

10. STABILITY AND REACTIVITY

Chemical stability:	Stable under recommended storage conditions..
Hazard polymerization:	Hazardous polymerization does not occur.
Hazardous decomposition products:	Oxygen which supports combustion.
Materials to avoid:	Reducing agents, wood, paper and other combustibles, iron and other heavy metals, copper, alloys and caustics.
Conditions to avoid:	Excessive heat and contamination could cause product to become unstable and decompose.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Dermal Rabbit (mg/kg):	6.5 g/kg at 70% hydrogen peroxide
LD50 Oral Rat (f) (mg/kg):	0.17 mg/L at 50% Hydrogen Peroxide

Local effects

Oral:	Harmful by ingestion.
Eye irritation	Severe irritant and corrosive to the eye when tested in animals..
Skin irritation:	Severe irritant and corrosive to the skin when tested in animals.
Inhalation:	Inhalation of mist or vapors may be severely irritating to the nose, throat and lungs.

Chronic toxicity

Oral:	No data available
Inhalation:	No data available
Dermal:	No data available

Subchronic toxicity

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Oral: No data available
Dermal: No data available

Specific effects

Corrosive effects: Corrosive to eyes and skin.
Sensitization: Not a sensitizer.
Target organ effects: Eyes, skin, lungs, respiratory system.
Mutagenic effects: Hydrogen peroxide is not known to produce mutagenic effects in humans..

Reproductive effects: Not a reproductive effector.
Developmental effects: Not reported to cause teratogenic or embryotic effects in humans

Carcinogenic effects: Hydrogen peroxide does not produce carcinogenic effects in humans
General notes:

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Due to its corrosive and oxidizing properties, this solution can be harmful to plant and animal life if this product is released into the environment, especially if released in large quantities.

Aquatic toxicity effects: Due to its corrosive and oxidizing properties, this solution can adversely affect aquatic environments if large quantities are released into receiving water or the environment.

96 HR LC50 Channel Catfish (mg/L):	37.4
96 HR LC50 Fathead Minnow (mg/L):	16.4
24 HR LC50 Daphnia Magna (mg/L):	7.7
48 HR LC50 Daphnia Pule (mg/L):	2.4
96 HR LC50 Freshwater Snail (mg/L):	17.7

Mobility: Unknown on product.
Persistence / degradability: Unknown on product.
Bioaccumulation: Unknown on product.
Degradation: Unknown on product.
General notes: Hydrogen peroxide in the aquatic environment is subject to various reduction or oxidation processes and decomposes into water and oxygen. Hydrogen Peroxide half life in freshwater ranged from 8 hours to 20 days, in air from 10-20 hours and in soils from minutes to hours depending upon microbiological activity and metal contaminants.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products: Waste disposal must be in accordance with appropriate US, Federal, State and International regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

Contaminated packaging: Triple rinse containers.

Methods for cleaning up: Small spills can be cleaned up using a damp sponge or an inert absorbent . For large spills, clear the affected area. Place all spill residue and disposable clean-up materials in an appropriate container and seal for disposal. Keep away from combustible material.

14. TRANSPORT INFORMATION

DOT:

DOT UN-No: UN 2014
DOT shipping name: Hydrogen peroxide, aqueous solutions
Hazard class: 5.1 (Oxidizer)
Subsidiary risk (hazard class): Class 8 Corrosive
Packing group: II
DOT reportable quantity (lbs): Not applicable.

IMO/IMDG:

Hazard class: 5.1(Oxidizer) 8 (Corrosive)
IMDG page: Chapter 2.5, Pages 54-56
IMO-labels: 5.1 (Oxidizer) 8 (Corrosive)
Packing group: II EMS F-H, S-Q
MFAG table No.: 7, 8,9,10
Proper shipping name: Hydrogen peroxide, aqueous solutions
UN/Id No.: UN 2014

ADR/RID:

Hazard class/packing group: No information
Item: No information
ADR/RID-labels: No information
UN/Id No.: No information
Proper shipping name: No information
TREM-card: Not available

IATA/ICAO:

Hazard class: 5.1, 8
Packing group: FORBIDDEN FOR AIRFREIGHT
Proper shipping name: Hydrogen peroxide, aqueous solutions
ID/UN No.: UN 2014
IATA - label: FORBIDDEN FOR AIRFREIGHT
ERG #: 140

TDG (Canada):

Status: No data is available on the product itself.
Packing group: No data is available on the product itself.

15. REGULATORY INFORMATION

Components	CAS Number	Weight %	EPCRA (SARA Title III) Section 313 Toxic Chemical -	EPCRA (SARA Title III) Section 302 Extremely Hazardous Substance -	CERCLA Hazardous Substances:	RCRA status:
HYDROGEN PEROXIDE SOLUTION	7722-84-1	>50		Listed.		

Components	CAS Number	Weight %	ACGIH TLV (TWA - 8hr)	ACGIH TLV (STEL)	ACGIH TLV (Ceiling Limits)
HYDROGEN PEROXIDE SOLUTION	7722-84-1	>50	1 ppm		

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Components	CAS Number	Weight %	OSHA (TWA - 8hr)	OSHA (STEL)	OSHA (Ceiling Limits)
HYDROGEN PEROXIDE SOLUTION	7722-84-1	>50	1.4 mg/m ³		

SARA (311, 312) hazard class:

Immediate health: None
Delayed health: None
Fire: None
Sudden Release of Pressure Hazard: None
Reactivity: None

Components	CAS Number	Weight %	New Jersey RTK List:	Pennsylvania RTK List:	Massachusetts RTK List:	Connecticut Hazardous Material List:	Michigan Critical List:
HYDROGEN PEROXIDE SOLUTION	7722-84-1	>50	Listed. Listed. Substance no. 1015	Listed.	Listed.	Listed.	

WHMIS:

WHMIS trade secret: None
WHMIS hazard class: C Oxidizing Materials
D2B Toxic Materials
E Corrosive Material



Notes:

1. SARA = Superfund Amendments and the Reauthorization Act.
2. CERCLA = Comprehensive Environmental Response, Compensations and Liability Act.
3. FIFRA = Federal Insecticide, Fungicide and Rodenticide Act
4. TSCA = Toxic Substance Control Act
5. WHMIS = Canadian Workplace Hazardous Materials Information System
6. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. OTHER INFORMATION

This data sheet contains changes from the previous version in section(s):

None

Additional advice None

Literary Reference: None

MSDS format: North American Format - U.S. and Canada
This Material Safety Data Sheet was prepared in accordance with OSHA 29 CFR 1910.1200.

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End of Safety Data Sheet