SAFETY DATA SHEET HYDROGEN PEROXIDE 35%

SOLVENT DIRECT

SDS #: 7722-84-1--35 **Revision date**: 2015-03-18

Format: NA Version 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name HYDROGEN PEROXIDE 35%

Other means of identification

CAS-No 7722-84-1

Recommended use of the chemical and restrictions on use

Recommended Use:

Restrictions on Use: Use as recommended by the label.

Manufacturer/Supplier

Solvent Direct Inc. 19129 S Hamilton Ave Gardena, CA 90248

Emergency telephone number

Chemtrec: 800-262-8200

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Vapors)	Category 4
Skin corrosion/irritation	Category 2 Sub-category B
Serious eye damage/eye irritation	Category 1

Version 1

Specific target organ toxicity (single exposure)	Category 3
Oxidizing Liquids	Category 2

GHS Label elements, including precautionary statements

EMERGENCY OVERVIEW

Danger

Hazard Statements

- H318 Causes serious eve damage
- H302 Harmful if swallowed
- H332 Harmful if inhaled
- H335 May cause respiratory irritation
- H315 Causes skin irritation
- H270 May cause or intensify fire; oxidizer



Precautionary Statements - Prevention

- P271 Use only outdoors or in a well-ventilated area
- P261 Avoid breathing mist/vapors/spray
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection
- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking
- P221 Take any precaution to avoid mixing with combustibles/flammables
- P220 Keep/Store away from clothing/flammable materials/combustibles

Precautionary Statements - Response

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

- P310 Immediately call a POISON CENTER or doctor
- P302 + P352 IF ON SKIN: Wash with plenty of water and soap
- P332 + P313 If skin irritation occurs: Get medical advice/ attention
- P362 + P364 Take off all contaminated clothing and wash it before reuse
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing
- P312 Call a POISON CENTER or doctor if you feel unwell
- P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
- P330 Rinse mouth
- P370 + P378 In case of fire: Use water for extinction

Hazards not otherwise classified (HNOC)

No hazards not otherwise classified were identified.

Other Information

Keep container in a cool place out of direct sunlight. Store only in vented containers. Do not store on wooden pallets. Do not return unused material to its original container. Avoid contamination - Contamination could cause decomposition and generation of oxygen which may result in high pressure and possible container rupture. Empty drums should be triple rinsed with water before discarding.

.

Version 1

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula HO - OH

Chemical name	CAS-No	Weight %
Hydrogen peroxide	7722-84-1	35
Water	7732-18-5	65

Occupational exposure limits, if available, are listed in section 8

4. FIRST	AID I	MEAS	JKES
----------	-------	------	------

Eye ContactRinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Seek

immediate medical attention/advice.

Skin ContactTake off contaminated clothing. Rinse skin immediately with plenty of water for 15-20

minutes. Call a poison control center or doctor for further treatment advice.

Inhalation Move to fresh air. If person is not breathing, contact emergency medical services, then give

artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or

doctor for further treatment advice.

Ingestion Rinse mouth. Do not induce vomiting. If conscious, give 2 glasses of water. Get immediate

medical attention. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

In case of accidental ingestion, necrosis may result from mucous membrane burns (mouth, esophagus and stomach). Oxygen rapid release may cause stomach swelling and

hemorrhaging, which may product major, or even fatal, injury to organs if a large amount

has been ingested.

In case of skin contact, may cause burns, erythema, blisters or even necrosis. Hydrogen

Peroxide irritates respiratory system and, if inhaled, may cause inflammation and

pulmonary edema. The effects may not be immediate.

Indication of immediate medical attention and special treatment needed, if necessary

Hydrogen peroxide at these concentrations is a strong oxidant. Direct contact with the eye is likely to cause corneal damage especially if not washed immediately. Careful opthalmologic evaluation is recommended and the possibility of local corticosteroid therapy should be considered. Because of the likelihood of corrosive effects on the gastrointestinal

tract after ingestion, and the unlikelihood of systemic effects, attemps at evacuating the stomach via emesis induction or gastric lavage should be avoided. There is a remote possibility, however, that a nasogastric or orogastric tube may be required for the reduction

of severe distension due to gas formation.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Water. Do not use any other substance.

Specific Hazards Arising from the

Chemical

In closed unventilated containers, risk of rupture due to the increased pressure from

decomposition. Contact with combustible material may cause fire

Hazardous Combustion Products On decomposition product releases oxygen which may intensify fire.

Explosion data

Sensitivity to Mechanical Impact Sensitivity to Static Discharge Not sensitive. Not sensitive.

Protective equipment and precautions for firefighters

Use water spray to cool fire exposed surfaces and protect personnel. Move containers from fire area if you can do it without risk. As in any fire, wear self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Version 1

Personal Precautions Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Isolate and

post spill area. Keep people away from and upwind of spill/leak. Eliminate all sources of

ignition and remove combustible materials.

Other Combustible materials exposed to hydrogen peroxide should be immediately submerged in

or rinsed with large amounts of water to ensure that all hydrogen peroxide is removed. Residual hydrogen peroxide that is allowed to dry (upon evaporation hydrogen peroxide can concentrate) on organic materials such as paper, fabrics, cotton, leather, wood or other

combustibles can cause the material to ignite and result in fire.

Environmental Precautions Do not flush into surface water or sanitary sewer system; if discharged into sewers or

watercourses, dilute with plenty of water. See Section 12 for additional Ecological

Information.

Methods for Containment Dike to collect large liquid spills. Stop leak and contain spill if this can be done safely. Small

spillage: Dilute with large quantities of water.

Methods for cleaning up Flush area with flooding quantities of water. Hydrogen peroxide may be decomposed by

adding sodium metabisulfite or sodium sulfite after diluting to about 5%.

7. HANDLING AND STORAGE

Handling Keep/Store away from clothing/ combustible materials. Wear personal protective

equipment. Reference to other sections. Never return unused hydrogen peroxide to original container. Contamination may cause decomposition and generation of oxygen gas which could result in high pressures and possible container rupture. Empty drums should be triple rinsed with water before discarding. Utensils used for handling hydrogen peroxide should only be made of glass, stainless steel, aluminum or plastic. Pipes and equipment should be passivated before first use. Use only in well-ventilated areas. Hydrogen peroxide should be

stored only in vented containers and transferred only in a prescribed manner.

Storage Keep containers in cool areas out of direct sunlight and away from combustibles. Provide

mechanical general and/or local exhaust ventilation to prevent release of vapor or mist into work environment. Containers must be vented. Keep/store only in original container. Store rooms or warehouses should be made of non-combustible materials with impermeable floors. In case of release, spillage should flow to safe area. Containers should be visually inspected on a regular basis to detect any abnormalities (swollen drums, increases in

temperature, etc.).

Incompatible products

Combustible materials. Copper alloys, galvanized iron. Strong reducing agents. Heavy metals. Iron. Copper alloys. Contact with metals, metallic ions, alkalis, reducing agents and

metals. Iron. Copper alloys. Contact with metals, metallic ions, alkalis, reducing agents and organic matter (such as alcohols or terpenes) may produce self-accelerated thermal

decomposition.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines Ingredients with workplace control parameters.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
Hydrogen peroxide	TWA: 1 ppm	TWA: 1 ppm	IDLH: 75 ppm	Mexico: TWA 1 ppm
7722-84-1		TWA: 1.4 mg/m ³	TWA: 1 ppm	Mexico: TWA 1.5 mg/m ³
			TWA: 1.4 mg/m ³	Mexico: STEL 2 ppm
				Mexico: STEL 3 mg/m ³
Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
Hydrogen peroxide	TWA: 1 ppm	TWA: 1 ppm	TWA: 1 ppm	TWA: 1 ppm
7722-84-1		TWA: 1.4 mg/m ³		TWA: 1.4 mg/m ³

Version 1

Engineering measures Ensure that eyewash stations and safety showers are close to the workstation location.

Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment

acetate, polycarbonate/acetate, PETG or thermoplastic.

Skin and Body Protection For body protection wear impervious clothing such as an approved splash protective suit

made of SBR rubber, PVC (PVC Outershell w/Polyester Substrate), Gore-Tex (Polyester trilaminate w/Gore-Tex), or a specialized HAZMAT Splash or Protective Suite (Level A, B, or C). For foot protection, wear approved boots made of NBR, PVC, Polyurethane, or neoprene. Overboots made of Latex or PVC, as well as firefighter boots or specialized HAZMAT boots are also permitted. DO NOT wear any form of boot or overboot made of nylon or nylon blends. DO NOT USE cotton, wool or leather as these materials react rapidly with higher concentrations of hydrogen peroxide. Completely submerge hydrogen peroxide contaminated clothing or other materials in water prior to drying. Residual hydrogen peroxide, if allowed to dry on materials such as paper, fabrics, cotton, leather, wood or

other combustibles, can cause the material to ignite and result in a fire.

Hand Protection For hand protection, wear approved gloves made of nitrile, PVC, or neoprene. DO NOT

use cotton, wool or leather for these materials react RAPIDLY with higher concentrations of hydrogen peroxide. Thoroughly rinse the outside of gloves with water prior to removal.

Inspect regularly for leaks.

Respiratory Protection If concentrations in excess of 10 ppm are expected, use NIOSH/DHHS approved

self-contained breathing apparatus (SCBA) or other approved air-supplied respirator (ASR) equipment (e.g., a full-face airline respirator (ALR)). DO NOT use any form of air-purifying respirator (APR) or filtering facepiece (dust mask), especially those containing oxidizable

sorbants such as activated carbon.

Hygiene measures Avoid breathing vapors, mist or gas. Clean water should be available for washing in case of

eye or skin contamination. .

General information Protective engineering solutions should be implemented and in use before personal

protective equipment is considered.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance Clear, colorless liquid

Physical State
Color
Colorless
Odor
Odor threshold
PH
Colorless
Odor threshold
Not applicable
<= 3.7
Melting point/freezing point
-33 °C

Melting point/freezing point -33 °C
Boiling Point/Range 108 °C
Flash point Not flammable

Evaporation Rate > 1 (n-butyl acetate=1)

Flammability (solid, gas) Not flammable Not applicable

Upper flammability limit: Lower flammability limit:

Vapor pressure23 mm Hg @ 30 °CVapor densityNo information availableDensity1.13 g/cm³ @ 20°C

Specific gravity 1.13

Water solubility

Solubility in other solvents

Partition coefficient

Autoignition temperature

Decomposition temperature

Completely soluble

No information available
log Kow = -1.5 @ 20 °C

Not combustible

100 °C (adiabatic)

Version 1

Viscosity, kinematic1.10 cP @ 20 °CViscosity, dynamicNo information availableExplosive propertiesNo information availableOxidizing propertiesStrong oxidizer

Molecular weight 34

Bulk density Not applicable

10. STABILITY AND REACTIVITY

Reactivity Reactive and oxidizing agent.

Chemical Stability Stable under normal conditions. Decomposes on heating. Stable under recommended

storage conditions.

Possibility of Hazardous Reactions Contact with organic substances may cause fire or explosion. Contact with metals, metallic

ions, alkalis, reducing agents and organic matter (such as alcohols or terpenes) may

produce self-accelerated thermal decomposition.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid Excessive heat; Contamination; Exposure to UV-rays; pH variations.

Incompatible materials Combustible materials. Copper alloys, galvanized iron. Strong reducing agents. Heavy

metals. Iron. Copper alloys. Contact with metals, metallic ions, alkalis, reducing agents and organic matter (such as alcohols or terpenes) may produce self-accelerated thermal

decomposition.

Hazardous Decomposition Products Oxygen which supports combustion. Liable to produce overpressure in container.

11. TOXICOLOGICAL INFORMATION

Product Information

LC50 Inhalation

LD50 Oral 50% solution: LD50 > 225 mg/kg bw (rat)

35 % solution:LD50 1193 mg/kg bw (rat) 70 % solution: LD50 1026 mg/kg bw (rat) 35% solution: LD50 > 2000 mg/kg bw (rabbit)

LD50 Dermal 35% solution: LD50 > 2000 mg/kg bw (rabbit) 70 % solution: LD50 9200 mg/kg bw (rabbit)

50% solution: LC50 > 170 mg/m³ (rat) (4-hr) Hydrogen Peroxide vapors: LC0 9400 mg/m³ (mouse) (5 - 15 minutes)

Hydrogen Peroxide vapors: LC50 > 2160 mg/m³ (mouse)

Serious eye damage/eye irritation

Skin corrosion/irritation

Corrosive. Risk of serious damage to eyes.

Moderately irritating (rabbit).

Sensitization Did not cause sensitization on laboratory animals.

Information on toxicological effects

Symptoms Vapors, mists, or aerosols of hydrogen peroxide can cause upper airway irritation,

inflammation of the nose, hoarseness, shortness of breath, and a sensation of burning or tightness in the chest. Prolonged exposure to concentrated vapor or to dilute solutions can cause irritation and temporary bleaching of skin and hair. Exposure to vapor, mist, or

aerosol can cause stinging pain and tearing of eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity This product contains hydrogen peroxide. The International Agency for Research on

Cancer (IARC) has conculded that there is inadequate evidence for carcinogenicity of hydrogen peroxide in humans, but limited evidence in experimental animals (Group 3 - not

classifiable as to its carcinogenicity to humans). The American Conference of

Governmental Industrial Hygienists (ACGIH) has concluded that hydrogen peroxide is a

Version 1

'Confirmed Animal Carcinogen with Unknown Relevance to Humans' (A3).

Chemical name	ACGIH	IARC	NTP	OSHA
Hydrogen peroxide 7722-84-1	A3	3		

Mutagenicity This product is not recognized as mutagenic by Research Agencies

In vivo tests did not show mutagenic effects

Reproductive toxicityNo toxicity to reproduction in animal studies.

STOT - single exposure STOT - repeated exposure

May cause respiratory irritation.

Not classified.

Target organ effects Eyes, Respiratory System, Skin.

Aspiration hazard Aspiration risk: may cause lung damage if swallowed.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effectsHydrogen peroxide is naturally produced by sunlight (between 0.1 and 4 ppb in air and 0.001 to 0.1 mg/L in water). Not expected to have significant environmental effects.

Hydrogen peroxide (7722-84-1) Active Ingredient(s) Duration Species Value Units Hydrogen peroxide l96 h LC50 Fish Pimephales 16.4 mg/L promelas 72 h LC50 Fish Leuciscus idus 35 Hydrogen peroxide mg/L 2.4 Hydrogen peroxide 48 h EC50 Daphnia pulex mg/L 24 h EC50 Daphnia magna 7.7 Hydrogen peroxide mg/L Hydrogen peroxide 72 h EC50 Algae Skeletonema 1.38 mg/L costatum 21 d NOEC Daphnia magna 0.63 Hydrogen peroxide mg/L

Persistence and degradability 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 contamination.

Bioaccumulation Material may have some potential to bioaccumulate but will likely degrade in most

environments before accumulation can occur.

Mobility Will likely be mobile in the environment due to its water solubility but will likely degrade over

time.

Other Adverse Effects Decomposes into oxygen and water. No adverse effects.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods Dispose of in accordance with local regulations. Can be disposed as waste water, when in

compliance with local regulations.

US EPA Waste Number D001

Contaminated Packaging Dispose of in accordance with local regulations.

Drums - Empty as thoroughly as possible. Triple rinse drums before disposal. Avoid contamination; impurities accelerate decomposition. Never return product to original

Version 1

container.

14. TRANSPORT INFORMATION

DOT

UN/ID no 2014

Proper Shipping Name HYDROGEN PEROXIDE, AQUEOUS SOLUTION

Hazard class 5.
Subsidiary class 8
Packing Group II

TDG

UN/ID no UN 2014

Proper Shipping Name HYDROGEN PEROXIDE, AQUEOUS SOLUTION

Hazard class 5.1 Subsidiary class 8 Packing Group II

ICAO/IATA Air regulation permit shipment of Hydrogen Peroxide (<=40%) in non-vented containers for

Air Cargo Only aircraft, as well as for Passenger and Cargo aircraft. HOWEVER, all PeroxyChem Hydrogen Peroxide containers are vented and therefore, air shipments of PeroxyChem H2O2 are not permitted. IATA air regulations state that venting of packages

containing oxidizing substances is not permitted for air transport.

IMDG/IMO

UN/ID no UN 2014

Proper Shipping Name HYDROGEN PEROXIDE, AQUEOUS SOLUTION

Hazard class 5.1 Subsidiary Hazard Class 8 Packing Group II

OTHER INFORMATION Protect from physical damage. Keep drums in upright position. Drums should not be

stacked in transit. Do not store drums on wooden pallets.

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard Yes
Chronic health hazard No
Fire hazard Yes
Sudden release of pressure hazard No
Reactive Hazard No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	SARA RQ
Hydrogen peroxide 7722-84-1		1000 lb	

Version 1

Hydrogen Peroxide RQ is for concentrations of > 52% only

International Inventories

Component	TSCA (United States)	DSL (Canada)	EINECS/EL INCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)	NZIoC (New Zealand)
Hydrogen peroxide 7722-84-1 (35)	Х	Х	X	Χ	Х	Х	X	X	Χ

Mexico - Grade Serious risk, Grade 3

CANADA

WHMIS Hazard Class C - Oxidizing materials

D1B - Toxic materials E - Corrosive material

F - Dangerously reactive material









16. OTHER INFORMATION

NFPA	Health Hazards 3	Flammability 0	Stability 1	Special Hazards OX
HMIS	Health Hazards 3	Flammability 0	Physical hazard 1	Special precautions H

NFPA/HMIS Ratings Legend Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0

Special Hazards: OX = Oxidizer

Protection = H (Safety goggles, gloves, apron, the use of supplied air or SCBA respirator is

required in lieu of a vapor cartidge respirator)

Uniform Fire Code Oxidizer: Class 2--Liquid

Revision date: 2015-03-18
Revision note Initial Release

Disclaimer

PeroxyChem believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specified product designated and may not be applicable where such product is used in combination with any other materials or in any process. Further, since the conditions and methods of use are beyond the control of PeroxyChem, PeroxyChem expressly disclaims any and all liability as to any results obtained or arising from any use of the products or reliance on such information.

Prepared By:

PeroxyChem
© 2015 PeroxyChem. All Rights Reserved.
End of Safety Data Sheet