

Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: January 27, 2021

1 Identification

- **Product identifier**
- **Trade name:** Hydrogen Peroxide, 35%
- **Product code:** DU00743.0042
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
AquaPhoenix Scientific, Inc.
860 Gitts Run Road
Hanover, PA 17331 USA
Tel +1 (717)632-1291
Toll-Free: (866)632-1291
info@aquaphoenixsci.com
- **Distributor:**
Dubois Chemicals Inc.
3630 East Kemper Rd,
Cincinnati, OH 45241
(800) 438-2647
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
- Ox. Liq. 2 H272 May intensify fire; oxidizer.
- Acute Tox. 4 H302 Harmful if swallowed.
- Skin Corr. 1C H314 Causes severe skin burns and eye damage.
- Eye Dam. 1 H318 Causes serious eye damage.
- STOT SE 3 H335 May cause respiratory irritation.

· Label elements

· GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms:



GHS03 GHS05 GHS07

- **Signal word:** Danger
- **Hazard statements:**
H272 May intensify fire; oxidizer.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

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· **Precautionary statements:**




- P210 Keep away from heat.
 P220 Keep/Store away from clothing/combustible materials.
 P221 Take any precaution to avoid mixing with combustibles.
 P260 Do not breathe mist/vapors/spray.
 P264 Wash thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.
 P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 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/doctor.
 P363 Wash contaminated clothing before reuse.
 P370+P378 In case of fire: Use for extinction: Water.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**

7732-18-5	Water	65%
7722-84-1	hydrogen peroxide	35%
	 Ox. Liq. 1, H271  Skin Corr. 1A, H314  Acute Tox. 4, H302; Acute Tox. 4, H332; STOT SE 3, H335	

· **Additional information:**

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.
 For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

· **Description of first aid measures**

· **After inhalation:**

Supply fresh air.
 Provide oxygen treatment if affected person has difficulty breathing.
 If experiencing respiratory symptoms: Call a poison center/doctor.

· **After skin contact:**

Immediately remove any clothing soiled by the product.
 Immediately rinse with water.
 If skin irritation continues, consult a doctor.

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Seek immediate help for blistering or open wounds.

· **After eye contact:**

Protect unharmed eye.

Remove contact lenses if worn.

Rinse opened eye for 15 to 20 minutes under running water. Then consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

· **Most important symptoms and effects, both acute and delayed:**

Breathing difficulty

Coughing

Caustic effect on skin and mucous membranes.

Strong irritant with the danger of severe eye injury.

Gastric or intestinal disorders when ingested.

Nausea in case of ingestion.

May cause respiratory irritation.

· **Danger:**

Causes severe skin burns and eye damage.

May be harmful if inhaled.

Harmful if swallowed.

· **Indication of any immediate medical attention and special treatment needed:**

Medical supervision for at least 48 hours.

If necessary oxygen respiration treatment.

5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

Use fire fighting measures that suit the environment.

Water

· **For safety reasons unsuitable extinguishing agents:** None.

· **Special hazards arising from the substance or mixture** May intensify fire; oxidizer.

· **Advice for firefighters**

· **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

· **Additional information:** Cool endangered receptacles with water spray.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

Take any precaution to avoid mixing with combustibles.

Keep away from ignition sources.

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

· **Environmental precautions**

Do not allow to enter sewers/ surface or ground water.

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Inform respective authorities in case of seepage into water course or sewage system.

- **Methods and material for containment and cleaning up**

Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders).

Send for recovery or disposal in suitable receptacles.

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- **Handling**

- **Precautions for safe handling:**

Prevent formation of aerosols.

Avoid splashes or spray in enclosed areas.

Use only in well ventilated areas.

Keep away from heat and direct sunlight.

Take any precaution to avoid mixing with combustibles.

- **Information about protection against explosions and fires:**

Contact with combustible material may cause fire.

Keep respiratory protective device available.

- **Conditions for safe storage, including any incompatibilities**

- **Requirements to be met by storerooms and receptacles:**

Provide ventilation for receptacles.

Store in a cool location.

Store only in the original receptacle.

- **Information about storage in one common storage facility:**

Store away from foodstuffs.

Store away from flammable substances.

Do not store together with reducing agents, heavy-metal compounds, acids and alkalis.

- **Further information about storage conditions:**

Protect from heat and direct sunlight.

Keep containers tightly sealed.

- **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

7722-84-1 hydrogen peroxide

PEL (USA)	Long-term value: 1.4 mg/m ³ , 1 ppm
REL (USA)	Long-term value: 1.4 mg/m ³ , 1 ppm
TLV (USA)	Long-term value: 1.4 mg/m ³ , 1 ppm
EL (Canada)	Long-term value: 1 ppm

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EV (Canada)	Long-term value: 1.4 mg/m ³ , 1 ppm
LMPE (Mexico)	Long-term value: 1 ppm A3

· Exposure controls

· General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

· Engineering controls: No relevant information available.

· Breathing equipment:

Use suitable respiratory protective device when aerosol or mist is formed.

For spills, respiratory protection may be advisable.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· Material of gloves

Nitrile rubber, NBR

Neoprene gloves

PVC gloves

Natural rubber, NR

Sensibilization by the components in the glove materials is possible.

· Not suitable are gloves made of the following materials: PVA gloves

· Eye protection:

Contact lenses should not be worn.



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

· Body protection: Protective work clothing

· Limitation and supervision of exposure into the environment

No relevant information available.

· Risk management measures See Section 7 for additional information.

9 Physical and chemical properties

· Information on basic physical and chemical properties

· Appearance:

Form: Liquid

Color: Colorless

· Odor: Pungent

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· Odor threshold:	Not determined.
· pH-value:	Not determined.
· Melting point/Melting range:	Not determined.
· Boiling point/Boiling range:	Not determined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Not applicable.
· Auto-ignition temperature:	Not determined.
· Decomposition temperature:	Not determined.
· Danger of explosion:	Not determined.
· Explosion limits	
Lower:	Not determined.
Upper:	Not determined.
· Oxidizing properties:	Oxidizer
· Vapor pressure:	23 hPa (17.3 mm Hg)
· Density:	1.15 g/cm ³ (9.6 lbs/gal)
· Relative density:	Not determined.
· Vapor density:	Not determined.
· Evaporation rate:	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Other information	No relevant information available.

10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
To avoid thermal decomposition, do not overheat.
- **Possibility of hazardous reactions**
Reacts spontaneously with alkaline metals.
Reacts with reducing agents.
Acts as an oxidizing agent on organic materials such as wood, paper and fats.
May produce violent reactions with bases and numerous organic substances including alcohols and amines.
- **Conditions to avoid**
Keep/Store away from clothing/combustible materials.
Keep away from heat and direct sunlight.

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- **Incompatible materials**
Reducing agents.
Flammable materials.
Strong acids and alkali.
- **Hazardous decomposition products** Oxygen

11 Toxicological information

· Information on toxicological effects

- **Acute toxicity:** Harmful if swallowed.

· LD/LC50 values that are relevant for classification:

7722-84-1 hydrogen peroxide

Oral	LD50	376 mg/kg (rat)
Inhalative	LC50/4h	(rat)

· Primary irritant effect:

- **On the skin:** Caustic effect on skin and mucous membranes.
- **On the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.

· IARC (International Agency for Research on Cancer):

7722-84-1 | hydrogen peroxide

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· NTP (National Toxicology Program):

None of the ingredients are listed.

· OSHA-Ca (Occupational Safety & Health Administration):

None of the ingredients are listed.

· Probable route(s) of exposure:

Ingestion.
Inhalation.
Eye contact.
Skin contact.

· Acute effects (acute toxicity, irritation and corrosivity):

Causes severe skin burns and eye damage.
Harmful if swallowed.
Irritating to respiratory system.
May be harmful if inhaled.

· Repeated dose toxicity: No relevant information available.

· Germ cell mutagenicity: Based on available data, the classification criteria are not met.

· Carcinogenicity: Based on available data, the classification criteria are not met.

· Reproductive toxicity: Based on available data, the classification criteria are not met.

· STOT-single exposure: May cause respiratory irritation.

· STOT-repeated exposure: Based on available data, the classification criteria are not met.

· Aspiration hazard: Based on available data, the classification criteria are not met.

12 Ecological information

· Toxicity

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- **Aquatic toxicity** The material is harmful to the environment.
- **Persistence and degradability** No relevant information available.
- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.
- **Ecotoxical effects:**
- **Remark:** Harmful to fish
- **Additional ecological information**
- **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Harmful to aquatic organisms
- **Other adverse effects** No relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.
Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.
- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|---|--|
| · UN-Number | UN2014 |
| · DOT, ADR/RID/ADN, IMDG, IATA | |
| · UN proper shipping name | |
|  Limited Quantity for packages less than 30 kg (66 lb) and inner packagings less than 1 L (0.3 gal). | |
| · DOT, IATA | Hydrogen peroxide, aqueous solutions |
| · ADR/RID/ADN | 2014 HYDROGEN PEROXIDE, AQUEOUS SOLUTION |
| · IMDG | HYDROGEN PEROXIDE, AQUEOUS SOLUTION |
| · Transport hazard class(es) | |

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· DOT



· Class 5.1
· Label 5.1, 8

· ADR/RID/ADN



· Class 5.1 (OC1)
· Label 5.1 + 8

· IMDG



· Class 5.1
· Label 5.1/8

· IATA



· Class 5.1
· Label 5.1 (8)

· Packing group

· DOT, ADR/RID/ADN, IMDG, IATA II

· Environmental hazards

· Marine pollutant: No

· Special precautions for user

Warning: Oxidizing substances

· Hazard identification number (Kemler code): 58

· EMS Number: F-H,S-Q

· Segregation groups Peroxides

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
· United States (USA)

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· **SARA**

· **Section 302 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act)**

All ingredients are listed or exempt.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

· **IARC (International Agency for Research on Cancer):**

7722-84-1 | hydrogen peroxide

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· **Canadian Domestic Substances List (DSL):**

All ingredients listed on DSL or NDSL.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

OSHA: Occupational Safety & Health Administration

Ox. Liq. 1: Oxidizing liquids – Category 1

Ox. Liq. 2: Oxidizing liquids – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Skin Corr. 1C: Skin corrosion/irritation – Category 1C

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)

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Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaassen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers