

Safety data sheet
 according to 1907/2006/EC, Article 31

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Printing date 20.03.2023

Revision: 20.03.2023

Version number 6.02 (replaces version 6.01)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Hydrogen Peroxide 35 %
- **Article number:** 147145
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 AppliChem GmbH
 Ottoweg 4
 D-64291 Darmstadt
- Tel.: +49 (0)6151 93570
 Fax.: +49 (0)6151 935711
 msds@applichem.com
- **Further information obtainable from:** Dept. Compliance
- **1.4 Emergency telephone number:** +49(0)6151 93570 (Mo-Th 08:00 - 17:00 h; Fr 08:00 - 14:30 h)

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
 Acute Tox. 4 H302 Harmful if swallowed.
 Skin Irrit. 2 H315 Causes skin irritation.
 Eye Dam. 1 H318 Causes serious eye damage.
 STOT SE 3 H335 May cause respiratory irritation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
 The product is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms**


 GHS05 GHS07
- **Signal word** Danger
- **Hazard-determining components of labelling:**
 hydrogen peroxide solution
- **Hazard statements**
 H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H335 May cause respiratory irritation.

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GB

Trade name: Hydrogen Peroxide 35 %

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· **Precautionary statements**

- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
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.
P321 Specific treatment (see on this label).
P330 Rinse mouth.
P362+P364 Take off contaminated clothing and wash it before reuse.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:**

Product contains: Restricted explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 5 (1) and (3).

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Description:** aqueous solution

· **Dangerous components:**

CAS: 7722-84-1 EINECS: 231-765-0 Reg.nr.: 01-2119485845-22-XXXX	hydrogen peroxide solution Ox. Liq. 1, H271; Skin Corr. 1A, H314; Acute Tox. 4, H302; Acute Tox. 4, H332 Specific concentration limits: Ox. Liq. 1; H271: C ≥ 70 % Ox. Liq. 2; H272: 50 % ≤ C < 70 % Skin Corr. 1A; H314: C ≥ 70 % Skin Corr. 1B; H314: 50 % ≤ C < 70 % Skin Irrit. 2; H315: 35 % ≤ C < 50 % Eye Dam. 1; H318: C ≥ 8 % Eye Irrit. 2; H319: 5 % ≤ C < 8 % STOT SE 3; H335: C ≥ 35 %	≥35-≤40%
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· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Involve doctor immediately.

· **After inhalation:**

Seek medical treatment in case of complaints.

In case of unconsciousness place patient stably in side position for transportation.

If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

· **After skin contact:**

Call a doctor immediately.

Immediately wash with water and soap and rinse thoroughly.

Immediately remove any clothing soiled by the product.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

make victim drink water (maximum of 2 drinking glasses)

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Call a doctor immediately.

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

No further relevant information available.

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

No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:** Water spray

· **For safety reasons unsuitable extinguishing agents:**

Foam

Extinguishing powder

Sand

Carbon dioxide

· **5.2 Special hazards arising from the substance or mixture**

Has a fire-promoting effect due to release of oxygen.

Non-combustible.

· **5.3 Advice for firefighters**

· **Protective equipment:** Wear self-contained respiratory protective device.

· **Additional information**

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Contain escaping vapours with water.

SECTION 6: Accidental release measures

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

Use respiratory protective device against the effects of fumes/dust/aerosol.

Avoid substance contact.

Do not inhale steams/aerosols.

· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**

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

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Clean up affected area.

· **6.4 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.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

· **Information about fire - and explosion protection:** The product is not flammable.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

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

Provide ventilation for receptacles.

Provide acid-resistant floor.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:**

Protect from exposure to the light.

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- Keep container tightly sealed.
Open receptacle only under localised extractor facilities.
Store under lock and key and with access restricted to technical experts or their assistants only.
- **Recommended storage temperature:** Room Temperature
 - **Storage class:** 5.1 B
 - **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· **Ingredients with limit values that require monitoring at the workplace:**

7722-84-1 hydrogen peroxide solution

WEL	Short-term value: 2.8 mg/m ³ , 2 ppm
	Long-term value: 1.4 mg/m ³ , 1 ppm

· **DNELs**

Inhalative	Acute - local effects, worker	3 mg/m ³ (worker)
	Long-term - local effects, worker	1.4 mg/m ³ (worker)
	Acute - local effects, general population	1.93 mg/m ³
	Long-term - local effects, general population	0.21 mg/m ³

· **PNECs**

Aquatic compartment - freshwater	0.0126 mg/L
Aquatic compartment - marine water	0.0126 mg/L
Aquatic compartment - water, intermittent releases	0.0138 mg/L
Sewage treatment plant	4.66 mg/L

- **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

- **Appropriate engineering controls** No further data; see item 7.

· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

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

- **Recommended filter device for short term use:** Special gas filter NO-P3

· **Hand protection**



Protective gloves

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

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **For the permanent contact gloves made of the following materials are suitable:**
Natural rubber, NR
Recommended thickness of the material: ≥ 0.6 mm
Value for the permeation: Level ≥ 480 min
- **As protection from splashes gloves made of the following materials are suitable:**
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
Value for the permeation: Level ≥ 30 min
- **Eye/face protection**
 Gauze goggles
- **Body protection:**
Use protective suit.
Acid resistant protective clothing

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Physical state** Fluid
- **Colour:** Colourless
- **Odour:** slightly pungent
- **Odour threshold:** Not determined.
- **Melting point/freezing point:** Undetermined.
- **Boiling point or initial boiling point and boiling range** 110 °C
- **Flammability** Not applicable.
- **Lower and upper explosion limit**
- **Lower:** Not determined.
- **Upper:** Not determined.
- **Flash point:** Not applicable.
- **Decomposition temperature:** Not determined.
- **pH at 20 °C** 2.7
- **Viscosity:**
- **Kinematic viscosity** Not determined.
- **Dynamic:** Not determined.
- **Solubility**
- **water:** Fully miscible.
- **Partition coefficient n-octanol/water (log value)** Not determined.
- **Vapour pressure at 20 °C:** 1.9 hPa
- **Density and/or relative density**
- **Density at 20 °C:** 1.13 g/cm³
- **Relative density** Not determined.
- **Vapour density** Not determined.

- **9.2 Other information**
- **Appearance:**
- **Form:** Fluid
- **Important information on protection of health and environment, and on safety.**
- **Ignition temperature:** Product is not selfigniting.
- **Explosive properties:** Product does not present an explosion hazard.

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- **Solvent content:**
- **Water:** 65.0 %
- **VOC (EC)** 0.00 %
- **Change in condition**
- **Evaporation rate** Not determined.

· **Information with regard to physical hazard classes**

- **Explosives** Void
- **Flammable gases** Void
- **Aerosols** Void
- **Oxidising gases** Void
- **Gases under pressure** Void
- **Flammable liquids** Void
- **Flammable solids** Void
- **Self-reactive substances and mixtures** Void
- **Pyrophoric liquids** Void
- **Pyrophoric solids** Void
- **Self-heating substances and mixtures** Void
- **Substances and mixtures, which emit flammable gases in contact with water** Void
- **Oxidising liquids** Void
- **Oxidising solids** Void
- **Organic peroxides** Void
- **Corrosive to metals** Void
- **Desensitised explosives** Void

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** Heating
- **10.3 Possibility of hazardous reactions**
Risk of explosion with:
alkali metals
alkali salts
alkali hydroxides
alkaline earth metals
metals
metals in powder form
metallic oxides
heavy metal salts
nonmetals
nonmetallic oxides
aldehydes
alcohols
amines
ammonia
hydrazines
combustible substances
acids
oxidizing agent
organic substances
peroxides
permanganates
organic solvents
organic nitro compounds
- **10.4 Conditions to avoid** No further relevant information available.

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· **10.5 Incompatible materials:**

Risk of explosion with:

alkali metals
alkali salts
alkali hydroxides
alkaline earth metals
metals in powder form
metallic oxides
heavy metal salts
nonmetals
nonmetallic oxides
Aldehyde
alcohols
Amines
ammonia
hydrazines
combustible substances
oxidizing agent
organic substances
peroxides
permanganates
organic solvents
organic nitro compounds

· **10.6 Hazardous decomposition products:** Oxygen

· **Additional information:**

light sensitive
heat-sensitive

SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

· **Acute toxicity** Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

Quantitative data on the toxicological effect of this product are not available.

Components		Type	Value	Species
Oral	LD50		1,200 mg/kg (rat)	
Dermal	LD50		6,500 mg/kg (rat)	

7722-84-1 hydrogen peroxide solution

Oral	LD50	1,200 mg/kg (rat)
Dermal	LD50	6,500 mg/kg (rat)
Inhalative	LC50/4 h	2,000 mg/l (rat)

· **Skin corrosion/irritation** Causes skin irritation.

· **Serious eye damage/irritation** Causes serious eye damage.

· **After inhalation:** Irritant to skin and mucous membranes.

· **STOT-single exposure** May cause respiratory irritation.

· **11.2 Information on other hazards**

· **Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:** No further relevant information available.

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Type of test	Effective concentration	Method	Assessment
EC50/72 h	1.38 mg/l (Algae)		
EC50/96 h	16.4 mg/l (fish)		
LC50/48 h	2.4 mg/l (daphnia magna)		
NOEC/72 h	0.63 mg/l (Algae)		

7722-84-1 hydrogen peroxide solution

EC50 35 mg/l (fish)

- **12.2 Persistence and degradability** The product is easily biodegradable.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Remark:**
When introduced properly, no impairments in the function of adapted biological waste-water-treatment plans are to be expected.
- **Other information:** Quantitative data on the ecological effect of this product are not available.
- **Additional ecological information:**
- **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Chemicals must be disposed of in compliance with the respective national regulations.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:**
Disposal must be made according to official regulations.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

SECTION 14: Transport information

- **14.1 UN number or ID number**
- **ADR, IMDG, IATA** UN2014
- **14.2 UN proper shipping name**
- **ADR, IMDG, IATA** HYDROGEN PEROXIDE, AQUEOUS SOLUTION
- **14.3 Transport hazard class(es)**
- **ADR**

- **Class** 5.1 (OC1) Oxidising substances.

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Trade name: Hydrogen Peroxide 35 %

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· **Label** 5.1+8

· **IMDG**



· **Class** 5.1 Oxidising substances.
· **Label** 5.1/8

· **IATA**



· **Class** 5.1 Oxidising substances.
· **Label** 5.1 (8)

· **14.4 Packing group**

· **ADR, IMDG, IATA** II

· **14.5 Environmental hazards:** Not applicable.

· **14.6 Special precautions for user** Warning: Oxidising substances.

· **Hazard identification number (Kemler code):** 58

· **EMS Number:** F-H,S-Q

· **Segregation groups** (SGG16) Peroxides

· **Stowage Category** D

· **Stowage Code** SW1 Protected from sources of heat.

· **Segregation Code** SG16 Stow "separated from" class 4.1

SG59 Stow "separated from" SGG14-permanganates
SG72 See 7.2.6.3.2.

· **14.7 Maritime transport in bulk according to IMO instruments**

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)** 1L

· **Excepted quantities (EQ)** Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **Transport category** 2

· **Tunnel restriction code** E

· **IMDG**

· **Limited quantities (LQ)** 1L

· **Excepted quantities (EQ)** Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 2014 HYDROGEN PEROXIDE, AQUEOUS
SOLUTION, 5.1 (8), II

GB

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SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 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.

- **Relevant phrases**
H271 May cause fire or explosion; strong oxidiser.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H332 Harmful if inhaled.
- **Department issuing SDS:** Dept. Compliance
- **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (UK REACH)
PNEC: Predicted No-Effect Concentration (UK REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Ox. Liq. 1: Oxidizing liquids – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- *** Data compared to the previous version altered.**

GB