

## SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

### Hydrogen peroxide 6% in water

Creation date	07th February 2023	Version	3.0
Revision date	26th June 2023		

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

- 1.1. Product identifier**  
Substance / mixture Hydrogen peroxide 6% in water mixture
- 1.2. Relevant identified uses of the substance or mixture and uses advised against**  
**Mixture's intended use**  
Analytical chemistry.  
**Mixture uses advised against**  
The product should not be used in ways other than those referred in Section 1.
- 1.3. Details of the supplier of the safety data sheet**  
**Supplier**  
Name or trade name Ing. Petr Švec - PENTA s.r.o.  
Address Radiová 1122/1, Praha 10, 102 00  
Czech Republic  
Identification number (CRN) 02096013  
VAT Reg No CZ02096013  
Phone +420 226 060 681  
E-mail info@pentachemicals.eu  
Web address www.pentachemicals.eu
- Competent person responsible for the safety data sheet**  
Name Ing. Petr Švec - PENTA s.r.o.  
E-mail info@pentachemicals.eu
- 1.4. Emergency telephone number**  
European emergency number: 112 112

#### SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture**  
**Classification of the mixture in accordance with Regulation (EC) No 1272/2008**  
The mixture is classified as dangerous.

Eye Irrit. 2, H319

Full text of all classifications and hazard statements is given in the section 16.

#### Most serious adverse effects on human health and the environment

Causes serious eye irritation.

- 2.2. Label elements**  
**Hazard pictogram**



**Signal word**  
Warning

**Hazard statements**  
H319

Causes serious eye irritation.

**Precautionary statements**  
P280  
P305+P351+P338

Wear eye protection.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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#### 2.3. Other hazards

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605. Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

**Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment**

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
Index: 008-003-00-9 CAS: 7722-84-1 EC: 231-765-0 Registration number: 01-2119485845-22-xxxx	hydrogen peroxide solution... %	6	Ox. Liq. 1, H271 Acute Tox. 4, H302, H332 Skin Corr. 1A, H314 Specific concentration limit: Skin Corr. 1A, H314: $C \geq 70 \%$ Skin Corr. 1B, H314: $50 \% \leq C < 70 \%$ Skin Irrit. 2, H315: $35 \% \leq C < 50 \%$ Eye Irrit. 2, H319: $5 \% \leq C < 8 \%$ Eye Dam. 1, H318: $8 \% \leq C < 50 \%$ Ox. Liq. 1, H271: $C \geq 70 \%$ Ox. Liq. 2, H272: $50 \% \leq C < 70 \%$ STOT SE 3, H335: $C \geq 35 \%$	1

#### Notes

- Note B: Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: 'nitric acid ... %'. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

Full text of all classifications and hazard statements is given in the section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet.

##### If inhaled

Terminate the exposure immediately; move the affected person to fresh air.

##### If on skin

Remove contaminated clothes. Wash the affected area with plenty of water, lukewarm if possible. Soap, soap solution or shampoo should be used if there is no skin injury. Provide medical treatment if skin irritation persists.

##### If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. Rinsing should continue at least for 10 minutes. Provide medical treatment, specialized if possible.

##### If swallowed

Rinse out the mouth with water and provide 2-5 dL of water. Provide medical treatment if the person has any health problems.

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- 4.2. Most important symptoms and effects, both acute and delayed**  
**If inhaled**  
 Not expected.  
**If on skin**  
 Not expected.  
**If in eyes**  
 Causes serious eye irritation.  
**If swallowed**  
 Irritation, nausea.
- 4.3. Indication of any immediate medical attention and special treatment needed**  
 Symptomatic treatment.

#### SECTION 5: Firefighting measures

- 5.1. Extinguishing media**  
**Suitable extinguishing media**  
 Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.  
**Unsuitable extinguishing media**  
 Water - full jet.
- 5.2. Special hazards arising from the substance or mixture**  
 In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.
- 5.3. Advice for firefighters**  
 Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Use a self-contained breathing apparatus and full-body protective clothing. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

#### SECTION 6: Accidental release measures

- 6.1. Personal precautions, protective equipment and emergency procedures**  
 Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Prevent contact with skin and eyes.
- 6.2. Environmental precautions**  
 Prevent contamination of the soil and entering surface or ground water.
- 6.3. Methods and material for containment and cleaning up**  
 Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies. After removal of the product, wash the contaminated site with plenty of water. Do not use solvents.
- 6.4. Reference to other sections**  
 See the Section 7, 8 and 13.

#### SECTION 7: Handling and storage

- 7.1. Precautions for safe handling**  
 Prevent contact with skin and eyes. Wash hands and exposed parts of the body thoroughly after handling. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection.
- 7.2. Conditions for safe storage, including any incompatibilities**  
 Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose.
- 7.3. Specific end use(s)**  
 not available

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## SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

The mixture contains substances for which occupational exposure limits are set.

## DNEL

hydrogen peroxide solution... %

Workers / consumers	Route of exposure	Value	Effect	Value determination	Source
Workers	Inhalation	1.4 mg/m <sup>3</sup>	Chronic effects local		
Workers	Inhalation	3 mg/m <sup>3</sup>	Acute effects local		
Consumers	Inhalation	0.21 mg/m <sup>3</sup>	Chronic effects local		
Consumers	Inhalation	1.93 mg/m <sup>3</sup>	Acute effects local		

## PNEC

hydrogen peroxide solution... %

Route of exposure	Value	Value determination	Source
Freshwater environment	0.0126 mg/l		
Marine water	0.0126 mg/l		
Freshwater sediment	0.047 mg/kg		
Sea sediments	0.047 mg/kg		
Microorganisms in sewage treatment	4.66 mg/l		
Soil (agricultural)	0.0023 mg/kg		

## 8.2. Exposure controls

Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

## Eye/face protection

Protective goggles.

## Skin protection

Hand protection: Protective gloves resistant to the product. Contaminated skin should be washed thoroughly.

## Respiratory protection

Halfmask with a filter against organic vapours or a self-contained breathing apparatus as appropriate if exposure limit values of substances are exceeded or in a poorly ventilated environment.

## Thermal hazard

Not available.

## Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

## SECTION 9: Physical and chemical properties

## 9.1. Information on basic physical and chemical properties

Physical state	liquid
Colour	colourless
Odour	without fragrance
Melting point/freezing point	data not available
Boiling point or initial boiling point and boiling range	data not available
Flammability	data not available
Lower and upper explosion limit	data not available
Flash point	data not available
Auto-ignition temperature	data not available
Decomposition temperature	data not available

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pH	data not available
Kinematic viscosity	data not available
Solubility in water	soluble
Partition coefficient n-octanol/water (log value)	data not available
Vapour pressure	data not available
Density and/or relative density	data not available
Relative vapour density	data not available
Particle characteristics	data not available

#### 9.2. Other information

not available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

not available

#### 10.2. Chemical stability

The product is stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

Unknown.

#### 10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

#### 10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents.

#### 10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

### SECTION 11: Toxicological information

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

No toxicological data is available for the mixture.

##### Acute toxicity

Based on available data the classification criteria are not met.

hydrogen peroxide solution... %

Route of exposure	Parameter	Value	Exposure time	Species	Sex
	LD <sub>50</sub>	>1026 mg/kg		Rat (Rattus norvegicus)	
Dermal	LD <sub>50</sub>	>2000 mg/kg		Rabbit	
Inhalation (gases)	LC <sub>50</sub>	>0.17 mg/kg	4 hours	Rat (Rattus norvegicus)	

##### Skin corrosion/irritation

Based on available data the classification criteria are not met.

hydrogen peroxide solution... %

Route of exposure	Result	Exposure time	Species
	Irritating		Rabbit

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#### Serious eye damage/irritation

Causes serious eye irritation.

hydrogen peroxide solution... %

Route of exposure	Result	Exposure time	Species
	Serious eye damage		Rabbit

#### Sensitization

hydrogen peroxide solution... %

Route of exposure	Result	Exposure time	Species	Sex
	Negative		Guinea-pig	

#### Respiratory or skin sensitisation

Based on available data the classification criteria are not met.

#### 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.

#### Toxicity for specific target organ - single exposure

Based on available data the classification criteria are not met.

#### Toxicity for specific target organ - repeated exposure

Based on available data the classification criteria are not met.

hydrogen peroxide solution... %

Route of exposure	Parameter	Method	Value	Specific target organ	Result	Species	Sex
	NOEL	OECD 408	26 mg/kg	Blood		Mouse	M

#### Aspiration hazard

Based on available data the classification criteria are not met.

hydrogen peroxide solution... %

Route of exposure	Result	Exposure time	Species	Sex
	Positive			

#### 11.2. Information on other hazards

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Acute toxicity

hydrogen peroxide solution... %

Parameter	Method	Value	Exposure time	Species	Environment
LC <sub>50</sub>		16.4 mg/l	96 hours	Fish (Pimephales promelas)	
EC <sub>50</sub>		7.7 mg/l	24 hours	Invertebrates (Daphnia magna)	
IC <sub>50</sub>		2.5 mg/l	72 hours	Algae (Chlorella vulgaris)	
EC <sub>50</sub>	OECD 209	466 mg/l		Microorganisms	
		34 mg/l		Higher plants	

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#### 12.2. Persistence and degradability

##### Half-life time

hydrogen peroxide solution... %

Route of exposure	Value	Value determination	Source
Air	24 hours		
Soil (agricultural)	12 hours		

not available

#### 12.3. Bioaccumulative potential

Not available.

#### 12.4. Mobility in soil

Not available.

#### 12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

#### 12.6. Endocrine disrupting properties

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

#### 12.7. Other adverse effects

Not available.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

##### Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

### SECTION 14: Transport information

#### 14.1. UN number or ID number

not subject to transport regulations

#### 14.2. UN proper shipping name

not relevant

#### 14.3. Transport hazard class(es)

not relevant

#### 14.4. Packing group

not relevant

#### 14.5. Environmental hazards

not relevant

#### 14.6. Special precautions for user

Reference in the Sections 4 to 8.

#### 14.7. Maritime transport in bulk according to IMO instruments

not relevant

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#### SECTION 15: Regulatory information

##### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Product contains regulated explosives precursor: Making available, introduction, possession and use of those precursors by member of the general public according to Regulation (EU) 2019/1148, Article 5 to 9. Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

##### 15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out.

#### SECTION 16: Other information

##### A list of standard risk phrases used in the safety data sheet

H271	May cause fire or explosion; strong oxidiser.
H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

##### Guidelines for safe handling used in the safety data sheet

P280	Wear eye protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

##### Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

##### Key to abbreviations and acronyms used in the safety data sheet

ADR	European agreement concerning the international carriage of dangerous goods by road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
EC	Identification code for each substance listed in EINECS
EC <sub>50</sub>	Concentration of a substance when it is affected 50% of the population
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
EU	European Union
EuPCS	European Product Categorisation System
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
IC <sub>50</sub>	Concentration causing 50% blockade
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization



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INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC <sub>50</sub>	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD <sub>50</sub>	Lethal dose of a substance in which it can be expected death of 50% of the population
log Kow	Octanol-water partition coefficient
NOEL	No observed effect level
OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bioaccumulative
Acute Tox.	Acute toxicity
Eye Dam.	Serious eye damage
Ox. Liq.	Oxidising liquid
Skin Corr.	Skin corrosion
STOT SE	Specific target organ toxicity - single exposure

#### Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

#### Recommended restrictions of use

not available

#### Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended.  
REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

#### The changes (which information has been added, deleted or modified)

The version 3.0 replaces the SDS version from 07 February 2023. Changes were made in sections 2, 15 and 16.

#### More information

Classification procedure - calculation method.

#### Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.