

## SAFETY DATA SHEET

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

### Sodium perchlorate monohydrate

Creation date	21st September 2019	Version	3.0
Revision date	08th November 2022		

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

- 1.1. Product identifier**  
 Substance / mixture Sodium perchlorate monohydrate substance  
 Chemical name Sodium perchlorate monohydrate  
 CAS number 7791-07-3  
 Index number 017-010-00-6  
 EC (EINECS) number 231-511-9  
 Registration number 01-2119540521-50-xxxx  
 Other substance name  
 Sodium perchlorate monohydrate
- 1.2. Relevant identified uses of the substance or mixture and uses advised against**  
**Substance's intended use**  
 Chemical production, analytical chemistry, laboratory synthesis, industrial applications.  
**Substance 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

#### SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture**  
**Classification of the substance in accordance with Regulation (EC) No 1272/2008**  
 The substance is classified as dangerous.
- Ox. Sol. 1, H271  
 Eye Irrit. 2, H319
- Full text of all classifications and hazard statements is given in the section 16.
- Most serious adverse physico-chemical effects**  
 May cause fire or explosion; strong oxidiser.
- Most serious adverse effects on human health and the environment**  
 Causes serious eye irritation.

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#### 2.2. Label elements

##### Hazard pictogram



##### Signal word

Danger

##### Dangerous substance

Sodium perchlorate monohydrate  
(Index: 017-010-00-6; CAS: 7791-07-3)

##### Hazard statements

H271 May cause fire or explosion; strong oxidiser.

H319 Causes serious eye irritation.

##### Precautionary statements

P220 Keep away from clothing and other combustible materials.

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

#### 2.3. Other hazards

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

#### 3.1. Substances

##### Chemical characterization

The substance specified below.

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
Index: 017-010-00-6 CAS: 7791-07-3 EC: 231-511-9 Registration number: 01-2119540521-50-xxxx	<b>substance main component</b> Sodium perchlorate monohydrate	>99	Ox. Sol. 1, H271 Eye Irrit. 2, H319	

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 unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

##### If inhaled

Terminate the exposure immediately; move the affected person to fresh air. Protect the person against growing cold. Provide medical treatment if irritation, dyspnoea or other symptoms persist.

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#### 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. Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

#### 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.

#### 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. Fight fire remotely due to the risk of explosion. Evacuate area.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Provide sufficient ventilation. The substance is flammable. May cause fire or explosion; strong oxidiser. Remove all ignition sources. 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

Place the product mechanically in an appropriate manner. Dispose of the collected material according to the instructions in the section 13.

#### 6.4. Reference to other sections

See the Section 7, 8 and 13.

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#### SECTION 7: Handling and storage

##### 7.1. Precautions for safe handling

The product should be used only in the areas where it is not in contact with open fire and other ignition sources. Use of antistatic clothes and footwear is recommended. Prevent contact with skin and eyes. No smoking. Wash hands and exposed parts of the body thoroughly after handling. Take any precaution to avoid mixing with combustibles. 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. Do not expose to sunlight.

##### 7.3. Specific end use(s)

not available

#### SECTION 8: Exposure controls/personal protection

##### 8.1. Control parameters

##### 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 (nitrile rubber). Contaminated skin should be washed thoroughly. Wear fire resistant or flame retardant clothing.

##### Respiratory protection

It is not needed.

##### 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	solid
Colour	white
Odour	without fragrance
Melting point/freezing point	471,8 °C
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
pH	data not available
Kinematic viscosity	data not available
Solubility in water	2090 g/l
Partition coefficient n-octanol/water (log value)	data not available
Vapour pressure	data not available
Density and/or relative density	data not available

##### 9.2. Other information

not available

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#### SECTION 10: Stability and reactivity

##### 10.1. Reactivity

The substance is oxidizing.

##### 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. Fe

##### 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 substance.

##### Acute toxicity

Based on available data the classification criteria are not met.

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Route of exposure	Parameter	Value	Exposure time	Species	Sex
Oral		500.1 mg/kg			

##### Skin corrosion/irritation

Based on available data the classification criteria are not met.

##### Serious eye damage/irritation

Causes serious eye irritation.

##### 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.

##### Aspiration hazard

Based on available data the classification criteria are not met.

##### 11.2. Information on other hazards

The substance does not have 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

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#### Acute toxicity

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Parameter	Value	Exposure time	Species	Environment
	>1.000 mg/l	96 hour	Fishes	
	>100 mg/l	48 hour	Daphnia (Daphnia magna)	
	86.3 mg/l	72 hour	Algae	

#### 12.2. Persistence and degradability

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

This substance does not have endocrine disrupting properties with respect to non-target organisms as it does not meet the criteria set out in section B of Regulation (EU) No 2017/2100. The substance does not have 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

UN 1502

#### 14.2. UN proper shipping name

SODIUM PERCHLORATE

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

5.1 Oxidizing substances

#### 14.4. Packing group

II - substances presenting medium danger

#### 14.5. Environmental hazards

not relevant

#### 14.6. Special precautions for user

not available

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

not relevant

##### Additional information

Hazard identification No.	<b>50</b>
UN number	<b>1502</b>
Classification code	O2
Safety signs	5.1



#### Air transport - ICAO/IATA

Packaging instructions passenger	558
Cargo packaging instructions	562

#### Marine transport - IMDG

EmS (emergency plan)	F-H, S-Q
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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 of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006, as amended.

#### 15.2. Chemical safety assessment

No chemical safety assessment has been performed for this substance.

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No chemical safety assessment has been performed for this substance.

#### SECTION 16: Other information

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

H271	May cause fire or explosion; strong oxidiser.
H319	Causes serious eye irritation.

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

P220	Keep away from clothing and other combustible materials.
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
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
ES	Identification code for each substance listed in EINECS
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
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
log Kow	Octanol-water partition coefficient
MARPOL	International Convention for the Prevention of Pollution from Ships
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
Eye Irrit.	Eye irritation
Ox. Sol.	Oxidising solid

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**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 18 February 2021. Changes were made in sections 1,2,4,5,6,7,8,9,11,12,13,15 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.