

Trade name: Natrii perboras

Substance number: 066456

Version: 4 / CH

Date revised: 18.11.2020

Replaces Version: 3 / CH

Print date: 18.11.20

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

1.1. Product identifier

Natrii perboras

Item No. 06645600

Substance / product identification

EINECS-No. 234-390-0

INCI SODIUM PERBORATE

REACH Registry No. 01-2119516039-43-XXXX

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/preparation

Chemical, Cleaning agent

1.3. Details of the supplier of the safety data sheet

Address/Manufacturer

Hänseler AG

Industriestrasse 35

9100 Herisau

Telephone no. 0041 (0)71 353 58 58

E-mail address of sdb@haenseler.ch

person responsible
for this SDS

1.4. Emergency telephone number

Switzerland :145 / Abroad +41 (0)44 251 51 51

SECTION 2: Hazards identification ***

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No. 1272/2008)

Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 4 H302

Eye Dam. 1 H318

Repr. 1B H360FD

STOT SE 3 H335

The product is classified and labelled in accordance with Regulation (EC) No 1272/2008

For explanation of abbreviations see section 16.

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard pictograms



Signal word

Danger

Hazard statements ***

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H302 Harmful if swallowed.
 H318 Causes serious eye damage.
 H360FD May damage fertility. May damage the unborn child.
 H335 May cause respiratory irritation.

Precautionary statements ***

P201 Obtain special instructions before use.
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position 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 or doctor.

Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)

contains *** Perboric acid, sodium salt [containing < 0,1 % (w/w) of particles with an aerodynamic diameter of below 50 micro metre]; orthoboric acid, sodium salt

Supplemental information**Further supplemental information**

Restricted to professional users

Other information

Not for supply to the general public in Switzerland

SECTION 3: Composition/information on ingredients *****Chemical characterization**

substances

Molecular weight

Value	154.86	g/mol
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Hazardous ingredients *****Perboric acid, sodium salt [containing < 0,1 % (w/w) of particles with an aerodynamic diameter of below 50 micro metre]**

CAS No.	11138-47-9	
EINECS no.	234-390-0	
Registration no.	01-2119516039-43-XXXX	
Concentration	>= 50	%

Classification (Regulation (EC) No. 1272/2008)

Ox. Sol. 2	H272
Acute Tox. 4	H302
Eye Dam. 1	H318
Repr. 1B	H360Df
STOT SE 3	H335

Concentration limits (Regulation (EC) No. 1272/2008)

Eye Dam. 1	H318	>= 22
Eye Irrit. 2	H319	>= 14 < 22
Repr. 1B	H360D	>= 6,5 < 9
Repr. 1B	H360D	>= 9

f

orthoboric acid, sodium salt

CAS No.	1330-43-4
EINECS no.	215-540-4
Registration no.	01-2119490790-32

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Concentration	>=	1	<	10	%
Classification (Regulation (EC) No. 1272/2008)					
	Repr. 1B		H360FD		

Concentration limits (Regulation (EC) No. 1272/2008)				
	Repr. 1B	H360F	>= 4,5	D

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Adhere to personal protective measures when giving first aid

After inhalation

Ensure supply of fresh air. In the event of symptoms take medical treatment.

After skin contact

Remove contaminated, soaked clothing immediately and dispose of safely. After contact with skin, wash immediately with plenty of water. Seek medical advice immediately.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.). Seek medical advice immediately.

After ingestion

Do not induce vomiting. Summon a doctor immediately. Rinse out mouth and give plenty of water to drink.

4.2. Most important symptoms and effects, both acute and delayed

Nausea, Vomiting, CNS Disturbance

4.3. Indication of any immediate medical attention and special treatment needed

Hints for the physician / treatment

Treat symptomatically

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide, Dry powder, Water spray jet, Extinguish greater fire with water spray or alcohol-resistant foam.

Non suitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

The product supports fire.

5.3. Advice for firefighters

Special protective equipment for fire-fighting

Do not inhale explosion and/or combustion gases. Use self-contained breathing apparatus. Wear full protective suit.

Other information

Cool endangered containers with water spray jet. Collect contaminated fire-fighting water separately, must not be discharged into the drains. Fire residues and contaminated fire-fighting water must be disposed of in accordance with the local regulations.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep away unprotected persons. Avoid dust formation. Ensure adequate ventilation.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Pick up mechanically. Send in suitable containers for recovery or disposal. Dispose of absorbed material in accordance with the regulations.

6.4. Reference to other sections

Information regarding personal protective measures, see Section 8. Information regarding waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Handle and open container with care. Avoid dust formation. Provide good ventilation of working area (local exhaust ventilation if necessary).

Advice on protection against fire and explosion

Hold breathing apparatus. Keep away from sources of ignition - No smoking.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Use aluminium containers. Use stainless steel containers.

Hints on storage assembly

Do not store together with: Reducing agents, Metals, Do not store with combustible materials.

Storage classes

Storage class according to TRGS 510	6.1D	Non-combustible substances of acute toxicity, category 3 / hazardous substances that are toxic or produce chronic effects
Storage category (Switzerland)	6.1	Toxic substances

Further information on storage conditions

Keep container tightly closed. Store in a dry place. Protect from atmospheric moisture and water.

SECTION 8: Exposure controls/personal protection ***

8.1. Control parameters

Exposure limit values ***

orthoboric acid, sodium salt

List	SUVA		
Type	MAK		
Value		0,8	ppm(V)
Short term exposure limit		0,8	ppm(V)
Pregnancy group: S; Remarks: SSc R1BF R1BD ;OAW, NIOSH			

Derived No/Minimal Effect Levels (DNEL/DMEL)

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orthoboric acid, sodium salt

Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	0.79	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	159.5	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	316.4	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	3.4	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	6.7	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Acute	
Mode of action	Local effects	
Concentration	11.7	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Acute	
Mode of action	Local effects	
Concentration	11.7	mg/m ³

Perboric acid, sodium salt [containing < 0,1 % (w/w) of particles with an aerodynamic diameter of below 50 micro metre]

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	0.36	mg/kg/d

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Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	36	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	101	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	0.5	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	2	mg/m ³

Predicted No Effect Concentration (PNEC)

orthoboric acid, sodium salt

Type of value	PNEC	
Type	Saltwater	
Concentration	2.9	mg/l

Type of value	PNEC	
Type	Freshwater	
Concentration	2.9	mg/l

Type of value	PNEC	
Type	Soil	
Concentration	5.4	mg/kg

Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	10	mg/l

8.2. Exposure controls

General protective and hygiene measures

Observe the usual precautions for handling chemicals. Keep away from food-stuffs, beverages and feed-stocks. Remove contaminated, soaked clothing immediately and dispose of safely. Wash hands before breaks and after work. Separate showers and rooms for changing clothes are necessary. Avoid contact with skin and eyes.

Respiratory protection

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necessary; Particle filter half mask, filter FFP2 - Norm DIN EN 149; Particle filter P2

Hand protection

Chemical resistant gloves

Appropriate Material nitrile rubber - NBR

Material thickness \geq 0.11 mmBreakthrough time $>$ 480 min**Eye protection**

Tightly fitting safety glasses

Body protection

protective overalls; Boots

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties****Form** Crystalline powder**Colour** white**Odour** odourless**pH value**

Value 10.1 to 10.4

Concentration/H₂O 23.4 g/l

Temperature 20 °C

Melting point

Value 65 °C

Initial boiling point and boiling range

Remarks not determined

Flash point

Value °C

Remarks Not applicable

Flammability (solid, gas)

Not self inflammable

DensityValue 1.731 g/cm³**Solubility in water**

Value 23.4 g/l

Temperature 20 °C

Decomposition temperatureValue $>$ 150 °C**Viscosity****dynamic**

Remarks Not applicable

9.2. Other information**Other information**

The product is not dangerous for explosions.

SECTION 10: Stability and reactivity**10.1. Reactivity**

No hazardous reactions when stored and handled according to prescribed instructions.

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10.2. Chemical stability

Stable under recommended storage and handling conditions (see section 7).

10.3. Possibility of hazardous reactions

No hazardous reactions known.

10.4. Conditions to avoid

Heat. Keep away from sources of heat and ignition.

10.5. Incompatible materials

strong reducing agents, Salts of heavy metals

10.6. Hazardous decomposition products

No hazardous decomposition products known. Oxygen

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute oral toxicity**

ATE	890	mg/kg
Method	calculated value (Regulation (EC) No. 1272/2008)	

Acute oral toxicity (Components)**orthoboric acid, sodium salt**

Species	rat	
LD50	> 2600	mg/kg
Method	OECD 401	

Perboric acid, sodium salt [containing < 0,1 % (w/w) of particles with an aerodynamic diameter of below 50 micro metre]

Species	rat	
LD50	890 to 1300	mg/kg
Method	EPA	
Source	EPA OPP 81-1	

Acute dermal toxicity (Components)**orthoboric acid, sodium salt**

Species	rabbit	
LD50	> 2000	mg/kg
Method	EPA	
Source	US EPA-FIFRA guidelines	

Perboric acid, sodium salt [containing < 0,1 % (w/w) of particles with an aerodynamic diameter of below 50 micro metre]

Species	rabbit	
LD50	> 2000	mg/kg
Method	OECD 402	

Acute inhalative toxicity (Components)**orthoboric acid, sodium salt**

Species	rat	
LC50	> 2.04	mg/l
Method	OECD 403	

Perboric acid, sodium salt [containing < 0,1 % (w/w) of particles with an aerodynamic diameter of below 50 micro metre]

Species	rabbit	
LC50	1165	g/m ³
Duration of exposure	4	h

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Method OECD 403

Skin corrosion/irritation

Remarks No effect of irritation known.

Serious eye damage/irritation

evaluation strongly irritant

Remarks Risk of serious damage to eyes.

Sensitization

Remarks No sensitization effect known.

Specific Target Organ Toxicity (STOT)**Single exposure****Repeated exposure**evaluation Causes damage to organs.
Route of exposure inhalative**Experience in practice**

Irritation

Other information

CMR-effects (carcinogenic, genetic damage and reproductive endanger)

SECTION 12: Ecological information**12.1. Toxicity****Fish toxicity**Reference substance Perboric acid (HBO(O₂)), sodium salt, tetrahydrate [containing < 0,1 % (w/w) of particles with an aerodynamic diameter of below 50 micro metre]

Species zebra fish (Brachydanio rerio)

LC50 51 mg/l

Reference substance orthoboric acid, sodium salt

Species Fathead minnow (Pimephales promelas)

LC50 79.7 mg/l

Duration of exposure 96 h

Fish toxicity (Components)**orthoboric acid, sodium salt**

Species Fathead minnow (Pimephales promelas)

LC50 79.9 mg/l

Duration of exposure 96 h

Perboric acid, sodium salt [containing < 0,1 % (w/w) of particles with an aerodynamic diameter of below 50 micro metre]

Species zebra fish (Brachydanio rerio)

LC50 51 mg/l

Method OECD 203

Daphnia toxicityReference substance Perboric acid (HBO(O₂)), sodium salt, tetrahydrate [containing < 0,1 % (w/w) of particles with an aerodynamic diameter of below 50 micro metre]

Species Daphnia

EC50 11 mg/l

Reference substance orthoboric acid, sodium salt

Species Daphnia

LC50 133 mg/l

Duration of exposure 48 h

Daphnia toxicity (Components)

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Perboric acid, sodium salt [containing < 0,1 % (w/w) of particles with an aerodynamic diameter of below 50 micro metre]

Species	Daphnia magna	
EC50	11	mg/l

Algae toxicity

Reference substance	Perboric acid (HBO(O ₂)), sodium salt, tetrahydrate [containing < 0,1 % (w/w) of particles with an aerodynamic diameter of below 50 micro metre]	
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Species	Selenastrum capricornutum	
EC50	3.3	mg/l

Reference substance	orthoboric acid, sodium salt	
Species	Pseudokirchneriella subcapitata	
EC50	40	mg/l

Duration of exposure	72	h
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Reference substance	orthoboric acid, sodium salt	
Species	Pseudokirchneriella subcapitata	
EC50	15.4	mg/l

Duration of exposure	96	h
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Algae toxicity (Components)

orthoboric acid, sodium salt

Species	Pseudokirchneriella subcapitata	
EC50	40.2	mg/l

Duration of exposure	72	h
Source	06645600 ex9 SDS 20170816.pdf	

Perboric acid, sodium salt [containing < 0,1 % (w/w) of particles with an aerodynamic diameter of below 50 micro metre]

Species	Selenastrum capricornutum	
	3.3	mg/l

12.2. Persistence and degradability

Biodegradability

Value	86	%
Duration of test evaluation	48	h
Method	biodegradable OECD 301D	
Source	Safety Data Sheet Supplier	

12.3. Bioaccumulative potential

General information

No data available

12.4. Mobility in soil

Mobility in soil

Slightly mobile in soils

12.5. Results of PBT and vPvB assessment

General information

Not applicable

12.6. Other adverse effects

General information / ecology

Product is slightly hazardous to water. Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations for the product

EWC waste code No not dispose with rubbish.
 Disposal in compliance with local and national regulations.
 EWC waste code Should not be released into the sanitary sewer system.

Disposal recommendations for packaging

Disposal in compliance with local and national regulations.

SECTION 14: Transport information

	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
14.1. UN number	The product does not constitute a hazardous substance in land transport.	The product does not constitute a hazardous substance in sea transport.	The product does not constitute a hazardous substance in air transport.

SECTION 15: Regulatory information ***

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

Water Hazard Class (Germany) ***

Water Hazard Class (Germany) WGK 1
 Remarks Derivation of WGK according to Annex 1 No. 5.2 AwSV

15.2. Chemical safety assessment

For this substance a chemical safety assessment has been carried out.

SECTION 16: Other information

Hazard statements listed in Chapter 3

H272 May intensify fire; oxidizer.
 H302 Harmful if swallowed.
 H318 Causes serious eye damage.
 H335 May cause respiratory irritation.
 H360Df May damage the unborn child. Suspected of damaging fertility.
 H360FD May damage fertility. May damage the unborn child.

CLP categories listed in Chapter 3

Acute Tox. 4 Acute toxicity, Category 4
 Eye Dam. 1 Serious eye damage, Category 1
 Ox. Sol. 2 Oxidising solid, Category 2
 Repr. 1B Reproductive toxicity, Category 1B
 STOT SE 3 Specific target organ toxicity - single exposure, Category 3

Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with: ***
 This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.