

# SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended.

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

### 1.1 Product identifier

**Product name:** Sodium hydroxide

**Product No.** 3718, 3304, 0290

#### Additional identification

<b>Chemical name:</b>	SODIUM HYDROXIDE
<b>Chemical formula:</b>	HNaO
<b>INDEX No.</b>	011-002-00-6
<b>CAS-No.</b>	1310-73-2
<b>EC No.</b>	215-185-5
<b>REACH Registration No.</b>	

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

**Identified uses:**

**Uses advised against:**

### 1.3 Details of the supplier of the safety data sheet

Avantor Performance Materials Poland S.A.  
Sowinskiego 11str., 44-101 Gliwice,

**Telephone:** 48 32 239-20-00  
**Fax:** 48 32 239-23-70

**E-mail:** export@avantormaterials.com; SDS: SDS@avantormaterials.com

### 1.4 Emergency telephone number: CHEMTREC: 1-800-424-9300 within US and Canada

CHEMTREC: 1-703-527-3887 outside US and Canada

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

The product has been classified according to the legislation in force.

**Classification according to Regulation (EC) No 1272/2008 as amended.**

#### Physical Hazards

Corrosive to metals	Category 1	H290: May be corrosive to metals.
---------------------	------------	-----------------------------------

#### Health Hazards

Skin corrosion	Category 1A	H314: Causes severe skin burns and eye damage.
----------------	-------------	--

Serious eye damage	Category 1	H318: Causes serious eye damage.
--------------------	------------	----------------------------------

### 2.2 Label Elements

**Contains:** SODIUM HYDROXIDE



**Signal Words:** Danger

**Hazard Statement(s):** H290: May be corrosive to metals.  
H314: Causes severe skin burns and eye damage.

**Precautionary Statement**

**Prevention:** P260: Do not breathe dust/fume/gas/mist/vapors/spray.

**Response:** P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
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/physician.

**Storage:** P405: Store locked up.

**Disposal:** P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**2.3 Other hazards** No data available.

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

**3.1 Substances**

**General information:** No data available.

**Chemical name** SODIUM HYDROXIDE

**INDEX No.:** 011-002-00-6

**CAS-No.:** 1310-73-2

**EC No.:** 215-185-5

**REACH Registration No.:**

**M-Factor::**

**Purity:** 100%

**Synonyms:** No data available.

**SECTION 4: First aid measures**

**General:** Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

**4.1 Description of first aid measures**

**Inhalation:** In case of inhalation of spray mist: Move person into fresh air and keep at rest. Consult a physician for specific advice.

**Eye contact:** If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor. Call a physician or poison control center immediately.

**Skin Contact:** Wash skin thoroughly with soap and water. Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

**Ingestion:** Promptly get affected person to drink large volumes of water to dilute the swallowed chemical. Get medical attention immediately.

**4.2 Most important symptoms and effects, both acute and delayed:** Corrosive to skin and eyes.

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

**Hazards:** No data available.

**Treatment:** No data available.

**SECTION 5: Firefighting measures**

**General Fire Hazards:** No unusual fire or explosion hazards noted.

**5.1 Extinguishing media Suitable extinguishing media:** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media:** The product reacts with water and will generate heat.

**5.2 Special hazards arising from the substance or mixture:** Fire may produce irritating, corrosive and/or toxic gases.

**5.3 Advice for firefighters Special fire fighting procedures:** Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

**Special protective equipment for fire-fighters:** Use standard firefighting procedures and consider the hazards of other involved materials.

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures:** Use personal protective equipment. Keep unauthorized personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them.

**6.2 Environmental Precautions:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**6.3 Methods and material for containment and cleaning up:** Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination. Neutralize spill area and washings with dilute acetic acid.

**6.4 Reference to other sections:** Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.

**SECTION 7: Handling and storage:**

- 7.1 Precautions for safe handling:** Do not get in eyes, on skin, on clothing. Do not eat, drink or smoke when using the product. Avoid breathing dust or vapor. Wash hands after handling.
- 7.2 Conditions for safe storage, including any incompatibilities:** Do not store in metal containers. Keep container tightly closed. Store in a well-ventilated place. Store in a dry place.
- 7.3 Specific end use(s):** No data available.

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

**8.1 Control Parameters  
 Occupational Exposure Limits**

Chemical name	type	Exposure Limit Values	Source
SODIUM HYDROXIDE - Inhalable fraction.	MAK	2 mg/m <sup>3</sup>	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001 (09 2007)
	MAK CEIL	4 mg/m <sup>3</sup>	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001 (09 2007)

**Biological Limit Values**

None.

**8.2 Exposure controls**

**Appropriate Engineering Controls:** Adequate ventilation should be provided so that exposure limits are not exceeded.

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

**General information:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

**Eye/face protection:** Wear safety glasses with side shields (or goggles).

**Skin protection**

**Hand Protection:** Chemical resistant gloves

**Other:** Wear suitable protective clothing.

**Respiratory Protection:** In case of inadequate ventilation use suitable respirator. Air-purifying respirator with a high efficiency particulate filter.

**Hygiene measures:** Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash contaminated clothing before reuse.

**Environmental Controls:** No data available.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

Physical state:	solid
Form:	Pellets
Color:	White
Odor:	Odorless
Odor Threshold:	No data available.
pH:	13 (5,0 g/l, )
Melting Point:	323 °C
Boiling Point:	1.388 °C
Flash Point:	not applicable
Evaporation Rate:	No data available.
Flammability (solid, gas):	No data available.
Flammability Limit - Upper (%)-:	No data available.
Flammability Limit - Lower (%)-:	No data available.
Vapor pressure:	No data available.
Vapor density (air=1):	No data available.
Relative density:	2,13
Solubility(ies)	
Solubility in Water:	1.110 g/l
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Autoignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Viscosity:	No data available.
Explosive properties:	No data available.
Oxidizing properties:	No data available.

### 9.2 Other information

Molecular weight:	40 g/mol (HNaO)
-------------------	-----------------

## SECTION 10: Stability and reactivity

10.1 Reactivity:	No data available.
10.2 Chemical Stability:	Material is stable under normal conditions.
10.3 Possibility of hazardous reactions:	Hazardous polymerization does not occur. The substance is hygroscopic and will absorb water by contact with the moisture in the air.
10.4 Conditions to avoid:	Avoid conditions which create dust. Avoid heat. Water, moisture.
10.5 Incompatible Materials:	Oxidizing agents. Acids. Flammable liquid. Contact with metals may evolve flammable hydrogen gas.
10.6 Hazardous Decomposition Products:	Sodium oxides

## SECTION 11: Toxicological information

**Information on likely routes of exposure**

- Inhalation:** May cause damage to mucous membranes in nose, throat, lungs and bronchial system.
- Ingestion:** May cause burns of the gastrointestinal tract if swallowed.
- Skin Contact:** Causes severe skin burns.
- Eye contact:** Causes serious eye damage.

**11.1 Information on toxicological effects**

**Acute toxicity**

**Oral**

- Product:** LD 50 (Rat): 130 - 340 mg/kg  
 LD 50 (Rat): 130 - 340 mg/kg

- Specified substance(s)**  
 SODIUM HYDROXIDE LD 50 (Rat): : 130 - 340 mg/kg

**Dermal**

- Product:** LD 50 (Rabbit): 1.350 mg/kg  
 LD 50 (Rabbit): 1.350 mg/kg

- Specified substance(s)**  
 SODIUM HYDROXIDE LD 50 (Rabbit): : 1.350 mg/kg

**Inhalation**

- Product:** No data available.No data available.

- Specified substance(s)**  
 SODIUM HYDROXIDE No data available.

**Repeated dose toxicity**

- Product:**
- Specified substance(s)**  
 SODIUM HYDROXIDE No data available.

**Skin Corrosion/Irritation:**

- Product:** Causes severe skin burns.

- Specified substance(s)**  
 SODIUM HYDROXIDE No data available.

**Serious Eye Damage/Eye Irritation:**

- Product:** Causes serious eye damage.

- Specified substance(s)**  
 SODIUM HYDROXIDE No data available.

**Respiratory or Skin**

**Sensitization:**

- Product:** Not a skin sensitizer.

- Specified substance(s)**  
 SODIUM HYDROXIDE No data available.

**Germ Cell Mutagenicity**

**In vitro**

**Product:** No mutagenic components identified

**Specified substance(s)**

SODIUM HYDROXIDE No data available.

**In vivo**

**Product:** No data available.

**Specified substance(s)**

SODIUM HYDROXIDE No data available.

**Carcinogenicity**

**Product:** This substance has no evidence of carcinogenic properties.

**Specified substance(s)**

SODIUM HYDROXIDE No data available.

**Reproductive toxicity**

**Product:** No components toxic to reproduction

**Specified substance(s)**

SODIUM HYDROXIDE No data available.

**Specific Target Organ Toxicity - Single Exposure**

**Product:** None known.

**Specified substance(s)**

SODIUM HYDROXIDE No data available.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** None known.

**Specified substance(s)**

SODIUM HYDROXIDE No data available.

**Aspiration Hazard**

**Product:** Not classified

**Specified substance(s)**

SODIUM HYDROXIDE No data available.

**Other Adverse Effects:** None known.

**SECTION 12: Ecological information**

**12.1 Toxicity**

**Acute toxicity**

**Fish**

**Product:** No data available.

**Specified substance(s)**

SODIUM HYDROXIDE LC 50 (Western mosquitofish (*Gambusia affinis*), 96 h): 125 mg/l Mortality

**Aquatic Invertebrates**

**Product:** No data available.

**Specified substance(s)**

SODIUM HYDROXIDE EC 50 (Water flea (Ceriodaphnia dubia), 48 h): 34,59 - 47,13 mg/l Intoxication

**Chronic Toxicity**

**Fish**

**Product:** No data available.

**Specified substance(s)**

SODIUM HYDROXIDE No data available.

**Aquatic Invertebrates**

**Product:** No data available.

**Specified substance(s)**

SODIUM HYDROXIDE No data available.

**Toxicity to Aquatic Plants**

**Product:** No data available.

**Specified substance(s)**

SODIUM HYDROXIDE No data available.

**12.2 Persistence and Degradability**

**Biodegradation**

**Product:** Expected to be readily biodegradable.

**Specified substance(s)**

SODIUM HYDROXIDE No data available.

**BOD/COD Ratio**

**Product** No data available.

**Specified substance(s)**

SODIUM HYDROXIDE No data available.

**12.3 Bioaccumulative Potential**

**Product:** No data available on bioaccumulation.

**Specified substance(s)**

SODIUM HYDROXIDE No data available.

**12.4 Mobility in Soil:**

The product is water soluble and may spread in water systems.

**Known or predicted distribution to environmental compartments**

SODIUM HYDROXIDE No data available.

**12.5 Results of PBT and vPvB assessment:**

Not available.

SODIUM HYDROXIDE

No data available.

**12.6 Other Adverse Effects:**

Harmful to aquatic organisms. The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.



## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

<b>General information:</b>	No data available.
<b>Disposal methods:</b>	Discharge, treatment, or disposal may be subject to national, state, or local laws.

## SECTION 14: Transport information

### ADR

14.1 UN Number:	UN 1823
14.2 UN Proper Shipping Name:	SODIUM HYDROXIDE, SOLID
14.3 Transport Hazard Class(es)	
Class:	8
Label(s):	8
Hazard No. (ADR):	80
Tunnel restriction code:	(E)
14.4 Packing Group:	II
14.5 Environmental Hazards:	No
14.6 Special precautions for user:	–

### RID

14.1 UN Number:	UN 1823
14.2 UN Proper Shipping Name	SODIUM HYDROXIDE, SOLID
14.3 Transport Hazard Class(es)	
Class:	8
Label(s):	8
14.4 Packing Group:	II
14.5 Environmental Hazards:	No
14.6 Special precautions for user:	–

### IMDG

14.1 UN Number:	UN 1823
14.2 UN Proper Shipping Name:	SODIUM HYDROXIDE, SOLID
14.3 Transport Hazard Class(es)	
Class:	8
Label(s):	8
EmS No.:	F-A, S-B
14.4 Packing Group:	II
14.5 Environmental Hazards:	No
14.6 Special precautions for user:	–

### IATA

14.1 UN Number:	UN 1823
14.2 Proper Shipping Name:	Sodium hydroxide, solid
14.3 Transport Hazard Class(es):	
Class:	8
Label(s):	8
14.4 Packing Group:	II
14.5 Environmental Hazards:	No
14.6 Special precautions for user:	–

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: not applicable.

**SECTION 15: Regulatory information**

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

**EU Regulations**

Regulation (EC) No. 2037/2000 Substances that deplete the ozone layer: none

Regulation (EC) No. 850/2004 on persistent organic pollutants: none

Regulation (EC) No. 689/2008 Import and export of dangerous chemicals: none

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended: none

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use: none

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work.: none

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breast feeding.: none

Directive 96/82/EC (Seveso II): on the control of major accident hazards involving dangerous substances: none

EU. Regulation No. 166/2006 PRTR (Pollutant Release and Transfer Registry), Annex II: Pollutants: none

Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work:

Chemical name	CAS-No.	Concentration
SODIUM HYDROXIDE	1310-73-2	100%

15.2 Chemical safety assessment: No Chemical Safety Assessment has been carried out.

**SECTION 16: Other information**

Revision Information: Not relevant. Not relevant.

Key literature references and sources for data: No data available.

Wording of the H-statements in section 2 and 3

Training information: No data available.

Issue Date: 12.05.2016  
 SDS No.:

**Disclaimer:**

THE INFORMATION PRESENTED IN THIS MATERIAL SAFETY DATA SHEET (MSDS/SDS) WAS PREPARED BY TECHNICAL PERSONNEL BASED ON DATA THAT THEY BELIEVE IN THEIR GOOD FAITH JUDGMENT IS ACCURATE. HOWEVER, THE INFORMATION PROVIDED HEREIN IS PROVIDED "AS IS," AND AVANTOR PERFORMANCE MATERIALS MAKES AND GIVES NO REPRESENTATIONS OR WARRANTIES WHATSOEVER, AND EXPRESSLY DISCLAIMS ALL WARRANTIES REGARDING SUCH INFORMATION AND THE PRODUCT TO WHICH IT RELATES, WHETHER EXPRESS, IMPLIED, OR STATUTORY, INCLUDING WITHOUT LIMITATION, WARRANTIES OF ACCURACY, COMPLETENESS, MERCHANTABILITY, NON-INFRINGEMENT, PERFORMANCE, SAFETY, SUITABILITY, STABILITY, AND FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING, COURSE OF PERFORMANCE, OR USAGE OF TRADE. THIS MSDS/SDS IS INTENDED ONLY AS A GUIDE TO THE APPROPRIATE PRECAUTIONARY HANDLING OF THE MATERIAL BY A PROPERLY TRAINED PERSON USING THIS PRODUCT, AND IS NOT INTENDED TO BE COMPREHENSIVE AS TO THE MANNER AND CONDITIONS OF USE, HANDLING, STORAGE, OR DISPOSAL OF THE PRODUCT. INDIVIDUALS RECEIVING THIS MSDS/SDS MUST ALWAYS EXERCISE THEIR OWN INDEPENDENT JUDGMENT IN DETERMINING THE APPROPRIATENESS OF SUCH ISSUES. ACCORDINGLY, AVANTOR PERFORMANCE MATERIALS ASSUMES NO LIABILITY WHATSOEVER FOR THE USE OF OR RELIANCE UPON THIS INFORMATION. NO SUGGESTIONS FOR USE ARE INTENDED AS, AND NOTHING HEREIN SHALL BE CONSTRUED AS, A RECOMMENDATION TO INFRINGE ANY EXISTING PATENTS OR TO VIOLATE ANY FEDERAL, STATE, LOCAL, OR FOREIGN LAWS. AVANTOR PERFORMANCE MATERIALS REMINDS YOU THAT IT IS YOUR LEGAL DUTY TO MAKE ALL INFORMATION IN THIS MSDS/SDS AVAILABLE TO YOUR EMPLOYEES.