

# SAFETY DATA SHEET

According to US Regulation 29 CFR 1910.1200 (HazCom 2012)

## 1. Identification

**Product identifier:** Sodium Hydroxide, Pellets

**Other means of identification**

**Product No.:** 3115, 3717, 3718, 3720, 3722, 3723, 3728, 5045, 5565, 7001, 7680, 7690, 7708, 7740, 7760, 7772, BR20, BS20, 11128, 11680, 11708, 11722, 11728, 22228, 22728

**Recommended restrictions**

**Recommended use:** For Laboratory, Research or Manufacturing Use.  
**Restrictions on use:** Not determined.

**Details of the supplier of the safety data sheet**

Company Name: Avantor Performance Materials, LLC  
Address: 100 Matsonford Rd, Suite 200  
Radnor, PA 19087

Telephone: Customer Service: 855-282-6867

Contact Person: Product Information Compliance  
E-mail: info@avantormaterials.com

**Emergency telephone number:**

CHEMTREC: 1-800-424-9300 within US and Canada (24 hrs/day, 7 days/week)

## 2. Hazard(s) identification

**Hazard Classification**

**Physical Hazards**

Corrosive to metal Category 1

**Health Hazards**

Skin Corrosion/Irritation Category 1A

Serious Eye Damage/Eye Irritation Category 1

**Unknown toxicity - Health**

Acute toxicity, inhalation, dust or mist 100 %

**Unknown toxicity - Environment**

Acute hazards to the aquatic environment 0 %

Chronic hazards to the aquatic environment 100 %

**Label Elements**

**Hazard Symbol:**



**Signal Word:** Danger

**Hazard Statement:** May be corrosive to metals.  
Causes severe skin burns and eye damage.

**Precautionary Statements**

**Prevention:** Do not breathe dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Keep only in original packaging. Wash hands thoroughly after handling.

**Response:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Wash contaminated clothing before reuse. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Absorb spillage to prevent material damage.

**Storage:** Store locked up. Store in a corrosion-resistant container with a resistant inner liner. Store in a well-ventilated place. Keep container tightly closed.

**Disposal:** 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.

**Hazard(s) not otherwise classified (HNOC):** None.

**3. Composition/information on ingredients**

**Substances**

Chemical Identity	CAS number	Content in percent (%)*
Sodium hydroxide	1310-73-2	95.0 - 100.0%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**4. First-aid measures**

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

**Ingestion:** Call a physician or poison control center immediately. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

**Inhalation:** Move to fresh air. Call a physician or poison control center immediately. Apply artificial respiration if victim is not breathing. If breathing is difficult, give oxygen.

**Skin Contact:** 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.

**Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately.

**Most important symptoms/effects, acute and delayed**

**Symptoms:** Corrosive to skin and eyes.

**Hazards:** None known.

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

**Treatment:** Treat symptomatically. Symptoms may be delayed.

**5. Fire-fighting measures**

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

**Suitable (and unsuitable) 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.

**Specific hazards arising from the chemical:** Fire may produce irritating, corrosive and/or toxic gases.

**Special protective equipment and precautions 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:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** Keep unauthorized personnel away. Ventilate closed spaces before entering them. Use personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

**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.

**Notification Procedures:** 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.

**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.

**7. Handling and storage**

**Precautions for safe handling:** Do not get in eyes, on skin, on clothing. Do not eat, drink or smoke when using the product. Do not taste or swallow. Avoid breathing dust or vapor. Use personal protective equipment as required. Wash hands thoroughly after handling.

**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.

**8. Exposure controls/personal protection**

**Control Parameters**

**Occupational Exposure Limits**

Chemical Identity	Type	Exposure Limit Values	Source
Sodium hydroxide	Ceiling	2 mg/m3	US. ACGIH Threshold Limit Values (2011)
	Ceil_Time	2 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	2 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	Ceiling	2 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	Ceiling	2 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	Ceiling	2 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)
Sodium hydroxide - Particulate.	ST ESL	Health 20 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL	Health 2 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)

**Appropriate Engineering Controls** No data available.

**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. An eye wash and safety shower must be available in the immediate work area.

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

**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.

## 9. Physical and chemical properties

### Appearance

<b>Physical state:</b>	Solid
<b>Form:</b>	Pellets
<b>Color:</b>	White
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	12 (20 °C) (0.5% aqueous solution)
<b>Melting point/freezing point:</b>	323 °C
<b>Initial boiling point and boiling range:</b>	1,388 °C
<b>Flash Point:</b>	Not applicable
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	Noncombustible Solid
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	No data available.
<b>Vapor density:</b>	No data available.
<b>Density:</b>	2.13 g/ml (20 °C)
<b>Relative density:</b>	2.13 (25 °C)
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	1,110 g/l
<b>Solubility (other):</b>	ethanol: 138.9 g/l methanol: 240 g/l glycerol: Soluble
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>Other information</b>	
<b>Molecular weight:</b>	40 g/mol (NaOH)

## 10. Stability and reactivity

<b>Reactivity:</b>	Reacts violently with strong acids.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Hazardous polymerization does not occur. The substance is hygroscopic and will absorb water by contact with the moisture in the air.
<b>Conditions to avoid:</b>	Avoid dust formation. Heat. Moisture.
<b>Incompatible Materials:</b>	Oxidizing agents. Acids. Flammable liquid. Contact with metals may evolve flammable hydrogen gas.



**Hazardous Decomposition Products:** Sodium oxides.

**11. Toxicological information**

**Information on likely routes of exposure**

**Inhalation:** May cause damage to mucous membranes in nose, throat, lungs and bronchial system.

**Skin Contact:** Causes severe skin burns.

**Eye contact:** Causes serious eye damage.

**Ingestion:** May cause burns of the gastrointestinal tract if swallowed.

**Information on toxicological effects**

**Acute toxicity (list all possible routes of exposure)**

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

**Dermal Product:** LD 50 (Rabbit) 1,350 mg/kg

**Inhalation Product:** No data available.

**Repeated dose toxicity Product:** No data available.

**Skin Corrosion/Irritation Product:** Causes severe skin burns.

**Serious Eye Damage/Eye Irritation Product:** Causes serious eye damage.

**Respiratory or Skin Sensitization Product:** Not a skin nor a respiratory sensitizer.

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

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**  
No carcinogenic components identified

**US. National Toxicology Program (NTP) Report on Carcinogens:**  
No carcinogenic components identified

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**  
No carcinogenic components identified

**Germ Cell Mutagenicity**

**In vitro**  
**Product:** No mutagenic components identified

**In vivo**  
**Product:** No data available.

**Reproductive toxicity**

**Product:** No components toxic to reproduction

**Specific Target Organ Toxicity - Single Exposure**

**Product:** None known.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** None known.

**Aspiration Hazard**

**Product:** Not classified

**Other effects:** None known.

**12. Ecological information**

**Ecotoxicity:**

**Acute hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Specified substance(s):**

Sodium hydroxide  
LOAEL (Sander lucioperca, 24 h):  $\geq 35$  mg/l  
LC 50 (Western mosquitofish (Gambusia affinis), 96 h): 125 mg/l  
LC 50 (Lepomis macrochirus, 48 h): 99 mg/l

**Aquatic Invertebrates**

**Product:** No data available.

**Specified substance(s):**

Sodium hydroxide  
LC 50 (Ophryotrocha diadema, 48 h): 33 - 100 mg/l  
LOAEL (Daphnia magna): 40 - 240 mg/l  
LC 50 (Cockle, 48 h): 330 - 1,000 mg/l  
EC 50 (Water flea (Ceriodaphnia dubia), 48 h): 34.59 - 47.13 mg/l  
EC 50 (Ceriodaphnia sp., 48 h): 40.4 mg/l

**Chronic hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Aquatic Invertebrates**

**Product:** No data available.

**Toxicity to Aquatic Plants**

**Product:** No data available.

**Persistence and Degradability**

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

**BOD/COD Ratio**  
Product: No data available.

**Bioaccumulative potential**  
**Bioconcentration Factor (BCF)**  
Product: No data available on bioaccumulation.

**Partition Coefficient n-octanol / water (log Kow)**  
Product: No data available.

**Mobility in soil:** The product is water soluble and may spread in water systems.

**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.

**13. Disposal considerations**

**Disposal instructions:** Discharge, treatment, or disposal may be subject to national, state, or local laws.

**Contaminated Packaging:** Since emptied containers retain product residue, follow label warnings even after container is emptied.

**14. Transport information**

**DOT**

UN Number:	UN 1823
UN Proper Shipping Name:	Sodium hydroxide, solid
Transport Hazard Class(es)	
Class:	8
Label(s):	8
Packing Group:	II
Marine Pollutant:	No



Special precautions for user: Keep away from acids.

**IMDG**

UN Number: UN 1823  
 UN Proper Shipping Name: SODIUM HYDROXIDE, SOLID  
 Transport Hazard Class(es)  
     Class: 8  
     Label(s): 8  
     EmS No.: F-A, S-B  
 Packing Group: II  
 Marine Pollutant: No  
 Special precautions for user: Keep away from acids.

**IATA**

UN Number: UN 1823  
 Proper Shipping Name: Sodium hydroxide, solid  
 Transport Hazard Class(es):  
     Class: 8  
     Label(s): 8  
 Packing Group: II  
 Marine Pollutant: No  
 Special precautions for user: Keep away from acids.

**15. Regulatory information**

**US Federal Regulations**

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**  
 None present or none present in regulated quantities.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**  
 None present or none present in regulated quantities.

**CERCLA Hazardous Substance List (40 CFR 302.4):**

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Sodium hydroxide	1000 lbs.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**

Corrosive to metal  
 Skin Corrosion or Irritation  
 Serious eye damage or eye irritation

**SARA 302 Extremely Hazardous Substance**

None present or none present in regulated quantities.

**SARA 304 Emergency Release Notification**

None present or none present in regulated quantities.

**SARA 311/312 Hazardous Chemical**

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Sodium hydroxide	10000 lbs.

**SARA 313 (TRI Reporting)**

None present or none present in regulated quantities.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

None present or none present in regulated quantities.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3):**

<u><b>Chemical Identity</b></u> Sodium hydroxide	<u><b>Reportable quantity</b></u> Reportable quantity: 1000 lbs.
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**US State Regulations**

**US. California Proposition 65**  
No ingredient requiring a warning under CA Prop 65.

**US. New Jersey Worker and Community Right-to-Know Act**

**Chemical Identity**  
Sodium hydroxide

**US. Massachusetts RTK - Substance List**

**Chemical Identity**  
Sodium hydroxide

**US. Pennsylvania RTK - Hazardous Substances**

**Chemical Identity**  
Sodium hydroxide

**US. Rhode Island RTK**

**Chemical Identity**  
Sodium hydroxide

**International regulations**

**Montreal protocol**  
Not applicable

**Stockholm convention**  
Not applicable

**Rotterdam convention**  
Not applicable

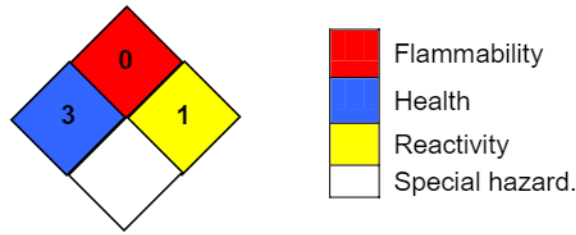
**Kyoto protocol**  
Not applicable

**Inventory Status:**

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Mexico INSQ:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory

**16. Other information, including date of preparation or last revision**

**NFPA Hazard ID**



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

<b>Issue Date:</b>	12-09-2020
<b>Revision Information:</b>	Not relevant.
<b>Version #:</b>	2.10
<b>Source of information:</b>	Sources of information used in preparing this SDS included one or more of the following: results from in house or supplier toxicology studies, information from the Toxicology Data Network (TOXNET), European Chemical Agency (ECHA) substance dossiers, IARC Monographs, US National Toxicology Program data, the Agency for Toxic Substances and Disease Registry, other manufacturer’s SDSs and other sources, as appropriate.
<b>Further Information:</b>	No data available.
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