

# Safety Data Sheet

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

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## SECTION 1: Identification

### Product identifier

Trade name/designation:	Sodium hydroxide 5.0N
Product No.:	BDH7225
Synonyms:	no data available
CAS No.:	1310-73-2
Other means of identification:	

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

Recommended Use:	For Further Manufacturing Use Only
Uses advised against:	Not for Human or Animal Drug Use

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

#### Supplier

##### **VWR International LLC**

Street	100 Matsonford Road Radnor Corporate Center, Building One, Suite 200 P. O. Box 6660
Postal code/city	Radnor, PA 19087
Telephone	+1-800-932-5000 toll-free within US/Canada +1-610-386-1700
Telefax:	+1-610-728-2103

### Emergency telephone

Telephone +1-800-424-9300 (Chemtrec, 24 hrs/day, 7 days/week, USA)

### Preparation Information

VWR International - Product Information Compliance

E-mail sds@vwr.com

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910.1200 (OSHA HCS)

Hazard classes and hazard categories	Hazard statements
Skin corrosion, category 1A	H314
Substance or mixture corrosive to metals, category 1	H290

### 2.2 Label elements

#### Labelling in accordance with 29 CFR 1910.1200 (OSHA HCS)

#### Hazard pictograms



Signal word: Danger

Hazard statements	
H314	Causes severe skin burns and eye damage.
H290	May be corrosive to metals.

Precautionary statements	
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P310	IF exposed or concerned: Immediately call a POISON CENTER/doctor.

#### Hazards not otherwise classified (HNOC)

none/none

## SECTION 3: Composition / information on ingredients

### 3.1 Substances

not applicable

### 3.2 Mixtures

Hazardous ingredients Classification according to the OSHA Hazard Communication Standard 29 CFR 1910.1200

Substance name	Concentration	Product identifier	Hazard classes and hazard categories
Sodium hydroxide	5 - 50 %	CAS No.: 1310-73-2	Skin Corr. 1A - H314

## SECTION 4: First aid measures

### 4.1 General information

IF exposed: Immediately call a POISON CENTER/doctor. If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

#### After inhalation

Immediately call a POISON CENTER/doctor. Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

#### In case of skin contact

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

#### After eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

#### In case of ingestion

Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. Rinse mouth thoroughly with water. Give nothing to eat or drink.

### 4.2 Most important symptoms/effects, acute and delayed

no data available

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

no data available

### 4.4 Self-protection of the first aider

First aider: Pay attention to self-protection!

### 4.5 Information to physician

no data available

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

The product itself does not burn.

Co-ordinate fire-fighting measures to the fire surroundings.

**Extinguishing media which must not be used for safety reasons**

no restriction

**5.2 Specific hazards arising from the chemical**

In case of fire may be liberated:

Pyrolysis products, toxic

**5.3 Advice for firefighters**

DO NOT fight fire when fire reaches explosives.

Protective equipment and precautions for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

**Additional information**

Do not allow run-off from fire-fighting to enter drains or water courses.

Do not inhale explosion and combustion gases.

Use water spray/stream to protect personnel and to cool endangered containers.

In case of fire: Evacuate area.

## SECTION 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures**

Special danger of slipping by leaking/spilling product. In case of major fire and large quantities: Remove persons to safety. Wear a self-contained breathing apparatus and chemical protective clothing.

**6.2 Environmental precautions**

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

**6.3 Methods and material for containment and cleaning up**

Spilled product must never be returned to the original container for recycling. Soak up inert absorbent and dispose as waste requiring special attention.

**6.4 Additional information**

Clear spills immediately.

## SECTION 7: Handling and storage

**7.1 Precautions for safe handling**

Avoid: Inhalation Avoid contact with eyes and skin. Use extractor hood (laboratory). If handled uncovered, arrangements with local exhaust ventilation have to be used. If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means. Protect from moisture.

**7.2 Conditions for safe storage, including any incompatibilities**

Recommended storage temperature: 15-25 °C

Keep container tightly closed and in a well-ventilated place.

**7.3 Specific end use(s)**

no data available

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Ingredient (Designation)	Regulatory information	Country	Limit value type (country of origin)	Limit value
Sodium hydroxide	NIOSH	US	STV	2 mg/m <sup>3</sup>
Sodium hydroxide	OSHA	US	LTV	2 mg/m <sup>3</sup>

### 8.2 Engineering controls

#### Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

#### Personal protection equipment (PPE)

Wear suitable protective clothing. When handling with chemical substances, protective clothing must be worn.

#### *Eye/face protection*

Eye glasses with side protection

#### *Skin protection*

Wear suitable gloves. When handling with chemical substances, protective gloves must be worn. In the case of wanting to use the gloves again, clean them before taking off and air them well. Check leak tightness/impermeability prior to use.

#### By short-term hand contact

Suitable material: NBR (Nitrile rubber)  
 Thickness of the glove material: 0,12 mm  
 Breakthrough time (maximum wearing time): > 480 min

#### By long-term hand contact

Suitable material: NBR (Nitrile rubber)  
 Thickness of the glove material: 0,38 mm  
 Breakthrough time (maximum wearing time): > 480 min

#### *Respiratory protection*

Respiratory protection necessary at: aerosol or mist formation If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.

#### *Additional information*

Wash hands before breaks and after work. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

#### *Environmental exposure controls*

no data available

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

(a) Appearance	
Physical state:	liquid
Color:	colorless
(b) Odour:	no data available
(c) Odour threshold:	no data available

#### Safety relevant basic data

(d) pH:	no data available
(e) Melting point/freezing point:	no data available
(f) Initial boiling point and boiling range:	no data available
(g) Flash point:	no data available
(h) Evaporation rate:	no data available
(i) Flammability (solid, gas):	not applicable
(j) Flammability or explosive limits	
Lower explosion limit:	no data available
Upper explosion limit:	no data available
(k) Vapour pressure:	no data available
(l) Vapour density:	no data available
(m) Relative density:	1.19 g/cm <sup>3</sup> (20 °C)
(n) Solubility(ies)	
Water solubility (g/L):	no data available
Soluble (g/L) in Ethanol:	no data available
(o) Partition coefficient: n-octanol/water:	no data available
(p) Auto-ignition temperature:	no data available
(q) Decomposition temperature:	no data available
(r) Viscosity	
Kinematic viscosity:	no data available
Dynamic viscosity:	no data available
(s) Explosive properties:	not applicable
(t) Oxidising properties:	not applicable

### 9.2 Other information

Bulk density:	not applicable
Refraction index:	no data available
Dissociation constant:	no data available
Surface tension:	no data available
Henry constant:	no data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no data available

## 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

## 10.3 Possibility of hazardous reactions

Formation of explosive mixtures with:

Metal, base

light metals

Formation of:

Hydrogen

Violent reaction with:

Acid

Oxidising agent, strong

## 10.4 Conditions to avoid

no data available

## 10.5 Incompatible materials

Substance, organic

Metal

## 10.6 Hazardous decomposition products

no data available

## 10.7 Additional information

no data available

# SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

### Acute effects

*Acute oral toxicity:*

no data available

*Acute dermal toxicity:*

Sodium hydroxide - LD50: 1350 mg/kg - Rabbit - (IUCLID)

*Acute inhalation toxicity:*

no data available

### Irritant and corrosive effects

*Primary irritation to the skin:*

Causes severe skin burns and eye damage.

*Irritation to eyes:*

Causes serious eye damage.

*Irritation to respiratory tract:*

not applicable

**Respiratory or skin sensitization**

In case of skin contact: not sensitising  
 After inhalation: not sensitising

**STOT-single exposure**

not applicable

**STOT-repeated exposure**

not applicable

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

**Carcinogenicity**

The table below indicates whether each agency has listed any ingredient as a carcinogen.

no data available	ACGIH	IARC	NTP	OSHA

**Germ cell mutagenicity**

No indications of human germ cell mutagenicity exist.

**Reproductive toxicity**

No indications of human reproductive toxicity exist.

**Aspiration hazard**

not applicable

**Other adverse effects**

no data available

**Additional information**

no data available

**SECTION 12: Ecological information**

**12.1 Ecotoxicity**

**Fish toxicity:**

Sodium hydroxide - LC50: 196 mg/l (96 h) - Adema, D.M.M. 1985. Aquatic Toxicity of Compounds that may be Carried by Ships (Marpol 19733 Annex II). A Progress Report for 1985. Tech.Rep.No.R85/217, TNO, The Hague, Netherlands :40 p.

**Daphnia toxicity:**

Sodium hydroxide - EC50: 40.4 mg/l (48 h) - Warne, M.S.J., and A.D. Schifko 1999. Toxicity of Laundry Detergent Components to a Freshwater Cladoceran and Their Contribution to Detergent Toxicity. Ecotoxicol.Environ.Saf. 44(2):196-206

**Algae toxicity:**

no data available

**Bacteria toxicity:**

no data available



## 12.2 Persistence and degradability

no data available

## 12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water: no data available

## 12.4 Mobility in soil:

no data available

## 12.5 Results of PBT/vPvB assessment

no data available

## 12.6 Other adverse effects

no data available

# SECTION 13: Disposal considerations

## 13.1 Waste treatment methods

### Appropriate disposal / Product

Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal.

Waste code product: no data available

### Appropriate disposal / Package

Dispose according to legislation. Handle contaminated packages in the same way as the substance itself.

### Additional information

no data available

# SECTION 14: Transport information

## Land transport (DOT)

UN-No.:	1824
Proper Shipping Name:	SODIUM HYDROXIDE SOLUTION
Class(es):	8
Classification code:	C5
Hazard label(s):	8
Packing group:	II
Environmental hazards:	No
Marine pollutant:	no data available
Special precautions for user:	

## Sea transport (IMDG)

UN-No.:	1824
Proper Shipping Name:	SODIUM HYDROXIDE SOLUTION
Class(es):	8
Classification code:	

Hazard label(s): 8  
Packing group: II  
Environmental hazards: No  
MARINE POLLUTANT: No  
Special precautions for user:  
Segregation group: 18  
EmS-No. F-A S-B  
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code not relevant

### Air transport (ICAO-TI / IATA-DGR)

UN-No.: 1824  
Proper Shipping Name: SODIUM HYDROXIDE SOLUTION  
Class(es): 8  
Classification code:  
Hazard label(s): 8  
Packing group: II  
Special precautions for user:

## SECTION 15: Regulatory information

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

#### SARA 313 Components

Does not contain listed substances.

#### Massachusetts Right To Know Components

- Sodium hydroxide - CAS No.: 1310-73-2

#### Pennsylvania Right To Know Components

- Sodium hydroxide - CAS No.: 1310-73-2

#### New Jersey Right To Know Components

- Sodium hydroxide - CAS No.: 1310-73-2

#### California Prop. 65 Components

Does not contain listed substances.

## SECTION 16: Other information

### Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygienists  
DOT - Department of Transportation  
IARC - International Agency for Research on Cancer  
IATA-DGR - International Air Transport Association-Dangerous Goods Regulations  
ICAO-TI - International Civil Aviation Organization-Technical Instructions  
IMDG - International Maritime Code for Dangerous Goods  
LTV - Long Term Value  
NIOSH - National Institute for Occupational Safety and Health  
NTP - National Toxicology Program  
OSHA - Occupational Safety & Health Administration  
PBT - Persistent, Bioaccumulative and Toxic  
PEL - Permissible Exposure Limit  
STV - Short Term Value  
SVHC - Substances of Very High Concern  
TDG - Transport of Dangerous Goods  
TLV - Threshold Limit Value  
vPvB - very Persistent, very Bioaccumulative

### Additional information

Indication of changes:                      general update

*The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guidance. The information in this document is based on the present state knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. VWR International and his Affiliates shall not be held liable for any damage resulting from handling.*