

### SECTION 1: Identification of the substance/mixture

#### 1.1. Product identifier

Product form	: Substance
Substance name	: Sodium Hydroxide
Formula	: NaOH
Molecular weight	: 40.00 g/mol
CAS No.	: 1310-73-2
Product code	: LW-NAOH
Synonyms	: Caustic Soda

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

Use of the substance/mixture	: Manufacture of substances
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#### 1.3. Emergency telephone number

Emergency number	: 1.800.424.9300 (USA) +1.703.527.3887 (INT)
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### SECTION 2: Hazards Identification

#### 2.1. Classification of the substance or mixture

##### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Corrosive to metals (Category 1), H290

Skin corrosion (Category 1A), H314


Serious eye damage (Category 1), H318

Acute aquatic toxicity (Category 3), H402

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2. Label elements

##### GHS Label elements, including precautionary statements

Hazard pictograms (GHS-US) : 

Signal word (GHS-US) : Danger

Hazard statements (GHS-US)

H290 : May be corrosive to metals.

H314 : Causes severe skin burns and eye damage.

H318 : Causes serious eye damage.

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H402	: Harmful to aquatic life.
Precautionary statement(s)	:
P234	: Keep only in original container.
P260	: Do not breathe dust or mist.
P264	: Wash skin thoroughly after handling.
P273	: Avoid release to the environment.
P280	: Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P331	: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310	: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P305 + P351 + P338 + P310	: 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.
P363	: Wash contaminated clothing before reuse.
P390	: Absorb spillage to prevent material damage.
P405	: Store locked up.
P406	: Store in corrosive resistant stainless steel container with a resistant inner liner.
P501	: Dispose of contents/ container to an approved waste disposal plant.

### 2.3. Hazards not otherwise classified (HNOC) or not covered by GHS

none

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Component	Classification	Concentration
Sodium Hydroxide	Met. Corr. 1; Skin Corr. 1A; Eye Dam. 1; Aquatic Acute 3; H290, H314, H318, H402	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: Description of first aid measures

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### 4.1. Description of first aid measures

- General advice : Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
- First-aid measures after inhalation : If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
- First-aid measures after skin contact : Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
- First-aid measures after eye contact : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.
- First-aid measures after ingestion : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

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

No data available.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### 5.2. Special hazards arising from the substance or mixture

No data available

### 5.3. Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4. More Information

No data available

## SECTION 6: Accidental release measures

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

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

### 6.2. Environmental precautions

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Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### 6.3. Methods and material for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 6.4. Reference to other sections

For disposal see section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

### 7.2. Conditions for safe storage, including any incompatibilities

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

### 7.3. Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Component	CAS-No.	Value	Control parameters	Basis
Sodium hydroxide	1310-73-2	TWA	2.000000 mg/m <sup>3</sup>	USA. Occupational Exposure Limit (OSHA) - Table Z-1 Limits for Air Contaminants
		C	2.000000 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritation Eye irritation Skin irritation		
		C	2 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
		C	2 mg/m <sup>3</sup>	California permissible exposure

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				limits for chemical contaminants (Title 8, Article 107)
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Application Area	Exposure routes	Health effect	Value
Workers	Inhalation	Long-term local effects	1 mg/m <sup>3</sup>
Consumers	Inhalation	Long-term local effects	1 mg/m <sup>3</sup>

### 8.2. Exposure controls

Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### 8.3. Personal protective equipment

Eye protection : Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection : Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

#### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)  
data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and

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	must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
Body protection	: Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Environmental exposure controls	: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Appearance	: Form: pellets Color: white
Odor	: odorless
Odor Threshold	: No data available
pH	: 14 at 50 g/l at 20 °C (68 °F)
Melting point/freezing point	: Melting point/range: 318 °C (604 °F)
Initial boiling point and boiling range	: 1,390 °C (2,534 °F)
Flash point	: Not applicable
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper/lower flammability or explosive limits	: No data available
Vapor pressure	: < 24.00 hPa (< 18.00 mmHg) at 20 °C (68 °F) 4.00 hPa (3.00 mmHg) at 37 °C (99 °F)
Vapor density	: 1.38 - (Air = 1.0)
Relative density	: 2.044 g/cm <sup>3</sup>

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Water solubility	: 2.1300 g/cm <sup>3</sup>
Partition coefficient: n-octanol/water	: ca.1,260 g/l at 20 °C (68 °F)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
<b>9.2. Other information</b>	
Bulk density	: ca.1,150 kg/m <sup>3</sup>
Relative vapor density	: 1.38 - (Air = 1.0)

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No data available

### 10.2. Chemical stability

Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

No data available

### 10.4. Conditions to avoid

No data available

### 10.5. Incompatible materials

Strong oxidizing agents, Strong acids, Organic materials

### 10.6. Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Sodium oxides

Other decomposition products - No data available

In the event of fire: see section 5

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity	: No data available
	Inhalation: No data available
	Dermal: No data available

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	No data available
Skin corrosion/irritation	: Skin - Rabbit Result: Causes severe burns. - 24 h
Serious eye damage/irritation	: Eyes - Rabbit Result: Corrosive - 24 h
Respiratory or skin sensitization	: Will not occur
Germ cell mutagenicity	: No data available
<b>Carcinogenicity</b>	
IARC:	: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP:	: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity	: No data available
Specific target organ toxicity (single exposure)	: No data available
Specific target organ toxicity (repeated exposure)	: No data available
Aspiration hazard	: No data available
Additional Information	: RTECS: WB4900000 Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

## SECTION 12: Ecological information

### 12.1. Toxicity

Toxicity to fish	: LC50 - <i>Gambusia affinis</i> (Mosquito fish) - 125 mg/l - 96 h LC50 - <i>Oncorhynchus mykiss</i> (rainbow trout) - 45.4 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	: Immobilization EC50 - <i>Daphnia</i> (water flea) - 40.38 mg/l - 48 h

### 12.2. Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

### 12.3. Bioaccumulative potential



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No data available

### 12.4. Mobility in soil

No data available

### 12.5. Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6. Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

- Product : Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
- Contaminated Packaging : Dispose of as unused product.

## SECTION 14: Transport information

### DOT (US)

- UN number : 1823
- Class : 8
- Packing group : II
- Proper shipping name : Sodium Hydroxide, solid
- Reportable Quantity (RQ) : 1000 lbs
- Poison Inhalation Hazard : No

### IMDG

- UN number : 1823
- Class : 8
- Packing group : II
- EMS-No : F-A, S-B
- Proper shipping name : SODIUM HYDROXIDE, SOLID

### IATA

- UN number : 1823

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Class : 8  
Packing group : II  
Proper shipping name : Sodium Hydroxide, solid

### SECTION 15: Regulatory information

#### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### SARA 311/312 Hazards

Reactivity Hazard, Acute Health Hazard

#### Massachusetts Right To Know Components

Sodium Hydroxide	CAS-No.	Revision Date
	1310-73-2	2007-03-01

#### Pennsylvania Right To Know Components

Sodium Hydroxide	CAS-No.	Revision Date
	1310-73-2	2007-03-01

#### New Jersey Right To Know Components

Sodium Hydroxide	CAS-No.	Revision Date
	1310-73-2	2007-03-01

#### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

### SECTION 16: Other information

#### Full text of H-Statements referred to under sections 2 and 3.

Aquatic Acute : Acute aquatic toxicity  
Eye Dam. : Serious eye damage  
H290 : May be corrosive to metals.  
H314 : Causes severe skin burns and eye damage.  
H318 : Causes serious eye damage.  
H402 : Harmful to aquatic life.  
Met. Corr. : Corrosive to metals

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### HMIS Rating

Health Hazard : 3

Chronic Health Hazard :

Flammability : 0

Physical Hazard : 0

### NFPA Rating

Health hazard : 3

Fire Hazard : 0

Reactivity Hazard : 0

Special Hazard :

### Further Information

Information in this SDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and Loudwolf Holdings Ltd. assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his/her application.