

## Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 02.09.2025

Version number 5.00 (replaces version 4.00)

Revision: 02.09.2025

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

- **Product identifier**
- **Trade name:** sodium hydroxide
- **Article number:** 2451
- **CAS Number:**  
1310-73-2
- **EC number:**  
215-185-5
- **Index number:**  
011-002-00-6
- **Registration number** The substance is exempt from REACH-registration.
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the mixture** Chemicals for synthesis
- **Uses advised against** No relevant information available.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
CAELO  
Caesar & Loretz GmbH  
Herderstr. 31  
D-40721 Hilden  
GERMANY
- **Further information obtainable from:**  
E-mail: [info@caelo.de](mailto:info@caelo.de)  
Tel.: +49210349940 (during regular opening hours)
- **Emergency telephone number:**  
Poison Information Center Bonn  
Venusberg-Campus 1, 53127 Bonn  
Tel: +49 (0) 228-192400

### 2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
Skin Corr. 1A H314 Causes severe skin burns and eye damage.
- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



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- **Signal word** Danger
- **Hazard statements**  
H314 Causes severe skin burns and eye damage.
- **Precautionary statements**  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or 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/doctor.  
P321 Specific treatment (see on this label).  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Determination of endocrine-disrupting properties** Not applicable.

### 3 Composition/information on ingredients

- **Substances**
- **CAS No. Description**  
CAS: 1310-73-2 sodium hydroxide
- **Identification number(s)**
- **EC number:** 215-185-5
- **Index number:** 011-002-00-6
- **Specific concentration limits**  
Skin Corr. 1A; H314:  $C \geq 5\%$   
Skin Corr. 1B; H314:  $2\% \leq C < 5\%$   
Skin Irrit. 2; H315:  $0.5\% \leq C < 2\%$   
Eye Irrit. 2; H319:  $0.5\% \leq C < 2\%$

### 4 First aid measures

- **Description of first aid measures**
- **After inhalation:**  
Bring the person out of the contaminated area to fresh air.  
Call a doctor immediately.  
Show product-label or this MSDS.
- **After skin contact:**  
Remove contaminated clothing immediately.  
Wash with polyethylene glycol 400 and then rinse with plenty amounts of water.
- **After eye contact:**  
Rinse opened eye for several minutes under running water.  
Seek medical advice, even if no immediate symptoms are observed.
- **After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor immediately.
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.

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- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.
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### 5 Firefighting measures

- **Extinguishing media**
  - **Suitable extinguishing agents:**  
All regular extinguishing media can be used.  
Use fire extinguishing methods suitable to surrounding conditions.
  - **Special hazards arising from the substance or mixture**  
not combustible  
Prefere dry extinguishing media. If water is used, take care of the generated solution (Avoid contact with aluminium alloys, hydrogen gas can be generated, Explosion hazard!).
  - **Advice for firefighters**
  - **Protective equipment:** In case of fire wear suitable protective clothes and respiratory protection.
  - **Additional information**  
Prevent from entering into drains. Fire residues must be disposed in accordance with official regulations.
- 

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Avoid contact with the substance.  
Wear protective equipment. Keep unprotected persons away.
  - **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
  - **Methods and material for containment and cleaning up:**  
Use neutralising agent.  
Dispose contaminated material as waste according to section 13.
  - **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- 

### 7 Handling and storage

- **Precautions for safe handling** Caution: strong heating in contact with water.
  - **Information about fire - and explosion protection:** No special measures required.
  - **Conditions for safe storage, including any incompatibilities**
  - **Storage:**
  - **Requirements to be met by storerooms and receptacles:**  
Tightly closed. Store at a dry place. At room temperature (+15°C to +25°C).  
Unsuitable material for receptacle: aluminium.  
Unsuitable material for receptacle: tin.  
Unsuitable material for receptacle: zinc.
  - **Information about storage in one common storage facility:** Do not store together with acids.
  - **Further information about storage conditions:** No further information
  - **Storage class:** TRHS 510: 8 B Non-combustible corrosive substances
  - **Specific end use(s)** No further relevant information available.
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### 8 Exposure controls/personal protection

- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the eyes and skin.
- **Respiratory protection:** Dust protection mask.
- **Hand protection** Protective gloves
- **Material of gloves**
  - Rubber gloves
  - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
  - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye/face protection** Tightly sealed goggles

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Physical state** Solid
- **Colour:** White
- **Odour:** Odourless
- **Odour threshold:** Not determined.
- **Melting point/freezing point:** 323 °C
- **Boiling point or initial boiling point and boiling range** 1,388 °C
- **Flammability** Product is not flammable.
- **Lower and upper explosion limit**
- **Lower:** Not determined.
- **Upper:** Not determined.
- **Flash point:** Not applicable.
- **Decomposition temperature:** Not determined.
- **pH (50 g/l) at 20 °C** 14
- **Viscosity:**
- **Kinematic viscosity** Not applicable.
- **Dynamic:** Not applicable.
- **Solubility**
- **water:** Soluble.

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· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	0 hPa
· Density and/or relative density	
· Density at 20 °C:	2.13 g/cm <sup>3</sup>
· Relative density	Not determined.
· Vapour density	Not applicable.
· Particle characteristics	See section 3.
· Other information	
· Appearance:	
· Form:	Solid Pearls
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Not determined.
· Explosive properties:	Product does not present an explosion hazard.
· Change in condition	
· Evaporation rate	Not applicable.
· Information with regard to physical hazard classes	
· Explosives	Void Void
· Flammable gases	Void Void
· Aerosols	Void Void
· Oxidising gases	Void Void
· Gases under pressure	Void Void
· Flammable liquids	Void Void
· Flammable solids	Void Void
· Self-reactive substances and mixtures	Void Void
· Pyrophoric liquids	Void Void
· Pyrophoric solids	Void Void
· Self-heating substances and mixtures	Void Void
· Substances and mixtures, which emit flammable gases in contact with water	Void Void
· Oxidising liquids	Void Void

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· <b>Oxidising solids</b>	Void
	Void
· <b>Organic peroxides</b>	Void
	Void
· <b>Corrosive to metals</b>	Void
	Void
· <b>Desensitised explosives</b>	Void
	Void

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:**  
Acids  
Metals  
organic substances  
combustible substances  
nitrile  
ammonium compounds  
phenols
- **Hazardous decomposition products:** No dangerous decomposition products known.
- **Additional information:**  
Extremely hygroscopic; exothermic solution process in water, keep away from metals, glass, animal/plant tissue.

### 11 Toxicological information

- **Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:**  
**CAS: 1310-73-2 sodium hydroxide**  
Oral LD50 2,000 mg/kg (rabbit)  
LDL0 500 mg/kg (rabbit)  
LD50 (i.p.) 40 mg/kg (mouse)
- **Primary irritant effect:**
- **Skin corrosion/irritation** Causes severe skin burns and eye damage.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.

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- **Aspiration hazard** Based on available data, the classification criteria are not met.
  - **Information on other hazards**
  - **Endocrine disrupting properties**  
On the basis of the available data, the substance does not meet the criteria for the identification of substances having properties of interference with the endocrine system, in accordance with Article 59, paragraph 1 of the REACH Regulation and the criteria established in the Delegated Regulation (EU) 2017 / 2100 of the Commission or in Commission Regulation (EU) 2018/605.
- 

## 12 Ecological information

- **Toxicity**
  - **Aquatic toxicity:**  
**CAS: 1310-73-2 sodium hydroxide**  
LC50 189 mg/L (Fish)  
EC50 40.4 mg/L (invertebrates)
  - **Persistence and degradability** No further relevant information available.
  - **Bioaccumulative potential** No further relevant information available.
  - **Mobility in soil** No further relevant information available.
  - **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.
  - **Endocrine disrupting properties**  
Based on the available data, the substance does not meet the criteria for the identification of substances with properties affecting the endocrine system according to Article 59(1) of the REACH Regulation and the criteria of the Commission Delegated Regulation (EU) 2017/2100 or in the Commission Regulation (EU) 2018/605.  
The product does not contain substances with endocrine disrupting properties.
  - **Other adverse effects**
  - **Additional ecological information:**
  - **General notes:**  
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
Must not reach sewage water or drainage ditch undiluted or unneutralised.  
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
- 

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to local regulations.

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### 14 Transport information

· UN number or ID number	UN1823
· ADR, IMDG, IATA	
· UN proper shipping name	1823 SODIUM HYDROXIDE, SOLID
· ADR	SODIUM HYDROXIDE, SOLID
· IMDG	Sodium hydroxide, solid
· IATA	
· Transport hazard class(es)	
· ADR, IMDG, IATA	
· Class	8 Corrosive substances.
· Label	8
· Packing group	
· ADR, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Corrosive substances.
· Hazard identification number (Kemler code):	80
· EMS Number:	F-A,S-B
· Segregation groups	SGG18 - Alkalis
· Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1 kg
· Transport category	2
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	1 kg
· UN "Model Regulation":	UN 1823 SODIUM HYDROXIDE, SOLID, 8, II

### 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Named dangerous substances - ANNEX I Substance is not listed.
- LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV) Not listed
- REGULATION (EC) No 1907/2006 ANNEX XVII  
Not listed  
Conditions of restriction: 75
- DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II  
Substance is not listed.
- National regulations:
- Storage of hazardous substances in in nonstationary vessels (TRGS 510) (Germany)  
TRHS 510: 8 B Non-combustible corrosive substances

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· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

The information provided is based on our current level of knowledge. This MSDS has been compiled and is exclusively for this product intended.

· **Version number of previous version:** 4.00

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

MAL-Code: Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Skin Corr. 1A: Skin corrosion/irritation – Category 1A