

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

# Sodium hydroxide 10M aqueous solution



Version number: 2.0  
Issued: 2024-04-10  
Replaces SDS: 2019-05-14

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

### 1.1. Product identifier

**Trade name**

Sodium hydroxide 10M aqueous solution

**Article No.**

34169776

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

**Relevant identified uses**

Research and development.

**Not suitable for use in**

Not suitable for human consumption or veterinary purposes.

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

**Supplier**

Molekula Group

Address

Molekula Ltd, Lingfield Way, Darlington,  
DL1 4XX Darlington  
United Kingdom

Telephone

+44 (0) 3302 000 333

Email

info@molekula.com

Web site

www.molekula.com

**Contact person**

Kevin Banks

**Email**

+44 (0) 7769276927

### 1.4. Emergency telephone number

**Poison center/Additional emergency number**

0344 892 0111 - National Poisons Information Service (Newcastle Centre)

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

# Sodium hydroxide 10M aqueous solution



Version number: 2.0  
 Issued: 2024-04-10  
 Replaces SDS: 2019-05-14

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

#### Classification

Corrosive to metals, hazard category 1

Skin corrosion, hazard category 1A

#### Hazard statements

H290, H314

### 2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

#### Hazard pictograms



#### Signal word

Danger

#### Hazard statements

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

#### Precautionary statements

P202 Do not handle until all safety precautions have been read and understood.

P233 Keep container tightly closed.

P260 Do not breathe dust/fumes/gas/mist/vapours/spray.

P262 Do not get in eyes, on skin, or on clothing.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

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 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P306 + P360 IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

### 2.3. Other hazards

No data available

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

# Sodium hydroxide 10M aqueous solution



Version number: 2.0

Issued: 2024-04-10

Replaces SDS: 2019-05-14

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

Chemical name	CAS No. EC No. REACH No. Index No.	Concentration	Classification	H-phrase M factor acute M factor chronic	Note
sodium hydroxide; caustic soda	1310-73-2 215-185-5 01-2119457892-27 011-002-00-6	>55 - <65%	Met. Corr. 1, Skin Corr. 1A, Eye Dam. 1	H290, H314, H318 - -	Skin Corr. 1A; H314: C ≥ 5 % Skin Corr. 1B; H314: 2 % ≤ C < 5 % Skin Irrit. 2; H315: 0,5 % ≤ C < 2 % Eye Irrit. 2; H319: 0,5 % ≤ C < 2 %;
Distilled water	- - - -	>35 - <45%	-	- - -	-

#### Substance additional information

For the complete text of H- / EUH-statements mentioned in this section, see section 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

IF exposed or concerned: Get medical advice/attention. First aiders/ medical personnel need to protect themselves. Show this Safety Data Sheet (SDS) to medical personnel.

#### Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. If breathing stops, provide artificial respiration. For breathing difficulties oxygen may be necessary.

#### Skin contact

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Immediately call a POISON CENTER/doctor.

#### Eye contact

Remove contact lenses if present. Rinse eyes with water. Continue to rinse for at least 15 minutes and seek medical attention.

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

# Sodium hydroxide 10M aqueous solution



Version number: 2.0  
 Issued: 2024-04-10  
 Replaces SDS: 2019-05-14

## **Ingestion**

IF SWALLOWED: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only if the persons are fully conscious and awake). Administer activated charcoal (20 - 40g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.

## **Information for doctors**

No data available.

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

The severity of the symptoms described will vary dependant of the concentration and the length of exposure. Causes burns by all exposure routes.

See section 11 for more detailed information on health effects and symptoms.

## **Inhalation**

Single exposure may cause the following adverse effects: Causes severe burns. Difficulty in breathing. Unconsciousness, possibly death.

## **Skin contact**

Single exposure may cause the following adverse effects: Causes severe burns. Blistering may occur.

## **Eye contact**

Single exposure may cause the following adverse effects: Causes serious eye damage.

## **Ingestion**

Single exposure may cause the following adverse effects: Severe abdominal pain. May cause severe internal injury.

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

Treat symptomatically. Immediately call a POISON CENTER/doctor.

## **SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

#### **Suitable extinguishing media**

In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.

#### **Unsuitable extinguishing media**

No specific fire fighting procedure given.

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

Specific hazards: Corrosive.

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

sodium oxides

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

# Sodium hydroxide 10M aqueous solution



Version number: 2.0

Issued: 2024-04-10

Replaces SDS: 2019-05-14

## 5.3. Advice for firefighters

### **Special protective equipment for fire-fighters**

Evacuate area. Avoid breathing gas, fume, vapours or spray. Prevent skin contact by maintaining a safe distance and by wearing suitable protective equipment/ clothing. Cool containers exposed to heat with water spray and remove container, if no risk is involved.

## SECTION 6: Accidental release measures

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

Do not breathe vapour/spray. Avoid contact with skin and eyes. For personal protection, see section 8.

In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.

### 6.2. Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

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

Collect with absorbent, non-combustible material into suitable containers.

### 6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### **Preventive handling precautions**

For precautions see section 2.2. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Work under hood Use personal protective equipment as required. Avoid ingestion and inhalation. IF SWALLOWED: Immediately call a POISON CENTER/doctor.

#### **General hygiene**

Observe good chemical hygiene practices. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove contaminated clothing and launder thoroughly before re-use. Wash skin thoroughly after handling.

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

Store in a dry place. Store in a closed container.

Store at ambient temperature.

### 7.3. Specific end use(s)

No specific usage precautions noted.

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

# Sodium hydroxide 10M aqueous solution



Version number: 2.0

Issued: 2024-04-10

Replaces SDS: 2019-05-14

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### DNEL/DMEL

Product/Substance name (CAS No./EC No.)	Type	Exposure	Value	Population	Effects
- (1310-73-2/215-185-5)	DNEL	Chronic (long term) Inhalation	1 mg/m <sup>3</sup>	Workers	Systemic
sodium hydroxide; caustic soda (1310-73-2/215-185-5)	DNEL	Chronic (long term) Inhalation	1 mg/m <sup>3</sup>	Workers	Local
sodium hydroxide; caustic soda (1310-73-2/215-185-5)	DNEL	Chronic (long term) Inhalation	1 mg/m <sup>3</sup>	Consumers	Local

### 8.2. Exposure controls

#### Personal Protective Equipment Symbols



#### Eye / face protection

Wear eye protection.

#### Hand protection

Wear protective gloves.

Recommended gloves: Nitrile.

Glove Thickness: 0.11mm

Breakthrough time: 8 hours

Always inspect gloves before use. If signs of wear and tear are noticed then the gloves should be replaced.

No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals. Wash contaminated skin thoroughly after handling.

#### Other skin protection

Wash skin thoroughly after handling.

#### Respiratory protection

Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided.

#### Environmental exposure controls

Avoid discharge into drains.

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

# Sodium hydroxide 10M aqueous solution



Version number: 2.0  
Issued: 2024-04-10  
Replaces SDS: 2019-05-14

## SECTION 9: Physical and chemical properties

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

#### Physical state

Liquid

#### Colour

Colourless.

#### Odour

No data available

#### Melting point / freezing point

No data available

#### Boiling point or initial boiling point and boiling range

No data available

#### Flammability

No data available

#### Lower and upper explosion limit

No data available

#### Flash point

No data available

#### Auto-ignition temperature

No data available

#### Decomposition temperature

No data available

#### pH

14

#### Kinematic viscosity

No data available

#### Solubility

No data available

#### Partition coefficient n-octanol/water

No data available

#### Vapour pressure

No data available

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

# Sodium hydroxide 10M aqueous solution



Version number: 2.0

Issued: 2024-04-10

Replaces SDS: 2019-05-14

## Density and/or relative density

1.33 - 1.36 g/cm<sup>3</sup>

## Relative vapour density

No data available

## Particle characteristics

No data available

## 9.2. Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

There are no known reactivity hazards associated with this product. In contact with metals generates hydrogen gas, which together with air can form explosive mixtures.

### 10.2. Chemical stability

Stable under the prescribed storage conditions.

### 10.3. Possibility of hazardous reactions

No data available

### 10.4. Conditions to avoid

Incompatible materials. Heating.

### 10.5. Incompatible materials

Acids. Organic Material Metals. Aluminium. Copper. Zinc.

### 10.6. Hazardous decomposition products

See section 5. sodium oxides

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute toxicity

Product / Substance name CAS / EC no.	Dose descriptor	Exposure route
sodium hydroxide; caustic soda 1310-73-2 / 215-185-5	If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach	Oral



According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

# Sodium hydroxide 10M aqueous solution



Version number: 2.0

Issued: 2024-04-10

Replaces SDS: 2019-05-14

## Skin corrosion/irritation

Product / Substance name CAS / EC no.	Result	Species
sodium hydroxide; caustic soda 1310-73-2 / 215-185-5	Corrosive to skin.	Rabbit

## Serious eye damage/irritation

Product / Substance name CAS / EC no.	Result	Species
sodium hydroxide; caustic soda 1310-73-2 / 215-185-5	Causes serious eye damage.	Rabbit

## Aspiration hazard

Based on available data, the classification criteria are not met.

## 11.2. Information on other hazards

No data available

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Acute fish toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Remark
sodium hydroxide; caustic soda 1310-73-2 / 215-185-5	LC50	125mg/l	96 hours	Gambusia affinis (Mosquito fish)	(ECOTOX Database)

#### Acute crustacean toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Remark
sodium hydroxide; caustic soda	EC50	40.4mg/l	48 hours	Ceriodaphnia dubia	(ECHA)

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

# Sodium hydroxide 10M aqueous solution



Version number: 2.0

Issued: 2024-04-10

Replaces SDS: 2019-05-14

Product / Sub- stance name CAS / EC no.	Measurement type	Value / Result	Duration of expos- ure	Species	Remark
1310-73-2 / 215- 185-5					

## Micro-/macro organism toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species
sodium hydroxide; caustic soda 1310-73-2 / 215-185-5	EC50	22mg/l	15 minutes	Photobacterium phos- phoreum

## 12.2. Persistence and degradability

No data available

## 12.3. Bioaccumulative potential

### Bioaccumulative potential

Product / Substance name CAS / EC no.	Result
Sodium hydroxide - aqueous solution 25% 1310-73-2 / 215-185-5	Bioaccumulative potential: unlikely

## 12.4. Mobility in soil

No data available

## 12.5. Results of PBT and vPvB assessment

No data available

## 12.6. Endocrine disrupting properties

No data available

## 12.7. Other adverse effects

No data available

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

# Sodium hydroxide 10M aqueous solution



Version number: 2.0

Issued: 2024-04-10

Replaces SDS: 2019-05-14

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal considerations

Dispose of contents/container in accordance with local/regional/national/international regulations.

## SECTION 14: Transport information

### 14.1. UN number

1824

### 14.2. UN proper shipping name

#### ADR / RID / ADN proper shipping name

SODIUM HYDROXIDE SOLUTION

#### IMDG proper shipping name

SODIUM HYDROXIDE SOLUTION

#### IATA proper shipping name

Sodium hydroxide solution

### 14.3. Transport hazard class(es)

#### Label

ADR/RID/ADN



8

IMDG



8

IATA



8

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

# Sodium hydroxide 10M aqueous solution



Version number: 2.0

Issued: 2024-04-10

Replaces SDS: 2019-05-14

## ADR / RID Class

8

## ADR / RID Classification code

C5

## ADR / RID hazard identification number

80

## IMDG Class

8

## IATA Class

8

## ADN Class

8

## ADN Class Code

C5

### 14.4. Packing group

ADR / RID / ADN: II

IMDG: II

IATA: II

### 14.5. Environmental hazards

Not applicable

### 14.6. Special precautions for user

#### Special precautions for user

Tunnel restriction code: E

Transport category: 2

#### IMDG EmS

F-A, S-B

### 14.7. Maritime transport in bulk according to IMO instruments

IBC Instruction: IBC02

## SECTION 15: Regulatory information

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

#### EU regulations

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

#### National regulations

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

# Sodium hydroxide 10M aqueous solution

Version number: 2.0  
Issued: 2024-04-10  
Replaces SDS: 2019-05-14



No data available

## 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

## SECTION 16: Other information

### Phrase meaning

Met. Corr. 1 - Corrosive to metals, hazard category 1

Skin Corr. 1A - Skin corrosion, hazard category 1A

Eye Dam. 1 - Serious eye damage, hazard category 1

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.