



## SAFETY DATA SHEET BARTOLINE - Caustic Soda

According to Regulation (EC) No 1907/2006 Annex II as amended by Regulation (EU) 2015/830.

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

#### 1.1. Product identifier

<b>Product name</b>	BARTOLINE - Caustic Soda
<b>Chemical name</b>	Sodium Hydroxide
<b>Synonyms; trade names</b>	caustic soda
<b>REACH registration number</b>	01-2119457892-27-0000
<b>CAS number</b>	1310-73-2
<b>EU index number</b>	011-002-00-6
<b>EC number</b>	215-185-5

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

<b>Identified uses</b>	Heavy Duty Cleaner
<b>Uses advised against</b>	Not to be used for cleaning skin as this may lead to skin disorders.

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

<b>Supplier</b>	Bartoline Limited Barmston Close Beverley East Yorkshire HU17 0LW 01482 678710 info@bartoline.co.uk
<b>Contact person</b>	Product Compliance Manager

#### 1.4. Emergency telephone number

<b>Emergency telephone</b>	01482 678710 (8.30am - 4.45pm Monday to Friday) or NHS 111 (General Public) (24 Hour service)
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**National emergency telephone number** National Poisons Information Service (24hours) 0844 892 0111

### SECTION 2: Hazards identification

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

##### Classification (EC 1272/2008)

<b>Physical hazards</b>	Met. Corr. 1 - H290
<b>Health hazards</b>	Skin Corr. 1A - H314 Eye Dam. 1 - H318
<b>Environmental hazards</b>	Not Classified

#### 2.2. Label elements

<b>EC number</b>	215-185-5
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## BARTOLINE - Caustic Soda

### Pictogram



<b>Signal word</b>	Danger
<b>Hazard statements</b>	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage.
<b>Precautionary statements</b>	P102 Keep out of reach of children. P260 Do not breathe dust/fumes. P280 Wear Nitrile/PVC protective gloves and a face shield. P310 Immediately call a Doctor/NHS 111. 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 or 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. P405 Store locked up. P501 Dispose of contents/container to hazardous waste collection point.
<b>Supplemental label information</b>	TO AVOID THE RISK OF SPILLAGE ALWAYS ENSURE THE LID IS SECURE AND THE CONTAINER IS SECURED UPRIGHT DURING TRANSPORTATION AND STORAGE. Do not mix with other chemicals.
<b>Detergent labelling</b>	Contains Sodium Hydroxide
<b>Supplementary precautionary statements</b>	P280 Wear Nitrile/PVC protective gloves and chemical resistant safety glasses with side shields.

### 2.3. Other hazards

#### SECTION 3: Composition/information on ingredients

##### 3.1. Substances

<b>Product name</b>	BARTOLINE - Caustic Soda
<b>Chemical name</b>	Sodium Hydroxide
<b>REACH registration number</b>	01-2119457892-27-0000
<b>EU index number</b>	011-002-00-6
<b>CAS number</b>	1310-73-2
<b>EC number</b>	215-185-5
<b>Composition comments</b>	100% Sodium Hydroxide

#### SECTION 4: First aid measures

##### 4.1. Description of first aid measures

<b>General information</b>	IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR THE NHS 111 SERVICE. If medical advice is needed, have product container or label at hand. Chemical burns must be treated by a physician. Show this Safety Data Sheet to the medical personnel.
<b>Inhalation</b>	Move the exposed person to fresh air at once. Get medical attention. Provide rest, warmth and fresh air. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.

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<b>Ingestion</b>	<ul style="list-style-type: none"> <li>- Call a doctor/NHS immediately.</li> <li>- Take victim immediately to hospital.</li> <li>- If swallowed, rinse mouth with water (only if the person is conscious).</li> <li>- Do NOT induce vomiting.</li> <li>- Artificial respiration and/or oxygen may be necessary.</li> </ul>
<b>Skin contact</b>	Immediate first aid is imperative. Remove contaminated clothing and rinse skin thoroughly with water. Get medical attention.
<b>Eye contact</b>	May cause permanent damage if eye is not immediately irrigated. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves.

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

<b>Inhalation</b>	Inhalation of sodium hydroxide causes irritation of the eyes and nose, sore throat and headache.
<b>Ingestion</b>	Ingestion of sodium hydroxide can cause spontaneous vomiting, chest and abdominal pain, and difficulty swallowing with drooling. Corrosive injury to the mouth, throat, esophagus, and stomach is extremely rapid and may result in perforation, hemorrhage, and narrowing of the gastrointestinal tract
<b>Skin contact</b>	Causes severe burns, skin redness and swelling of the tissue.
<b>Eye contact</b>	This product is strongly corrosive. Causes pain, twitching of the eyelids, tearing, inflammation, and severe burns. Redness, swelling and blurred vision

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

<b>Notes for the doctor</b>	Treat symptomatically.
<b>Specific treatments</b>	Early recognition and prompt management consisting of copious and prolonged wound irrigation is the mainstay of treatment.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	The product is non-combustible. Use fire-extinguishing media suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	Water may be ineffective.

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

<b>Specific hazards</b>	Reacts violently with water.
<b>Hazardous combustion products</b>	Gives off hydrogen by reaction with metals.

### 5.3. Advice for firefighters

<b>Protective actions during firefighting</b>	Avoid breathing fire vapours. Cool containers exposed to flames with water until well after the fire is out. Keep run-off water out of sewers and water sources. Dike for water control. Containers close to fire should be removed or cooled with water.
<b>Special protective equipment for firefighters</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Wear chemical protective suit.

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### SECTION 6: Accidental release measures

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

- Personal precautions** Do not touch or walk into spilled material. Avoid inhalation of vapours and contact with skin and eyes. Do not enter storage areas or confined spaces unless adequately ventilated. If ventilation is inadequate, suitable respiratory protection must be worn. Wear protective clothing, gloves, eye and face protection.
- For non-emergency personnel** Prevent further leakage or spillage if safe to do so. Keep away from Incompatible products.
- For emergency responders** Wear protective clothing as described in Section 8 of this safety data sheet. See section 11 for additional information on health hazards.  
For waste disposal, see section 13. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ventilate the area.

#### 6.2. Environmental precautions

- Environmental precautions** Do not discharge into drains, water courses or onto the ground. Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to the Environmental Agency or other appropriate regulatory body. Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

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

- Methods for cleaning up** Do not touch or walk into spilled material. Avoid spreading dust or contaminated materials. Avoid water contacting spilled material or leaking containers. Sweep up and shovel into suitable containers for disposal. Collect spillage for reclamation or disposal in sealed containers via a licensed waste contractor. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Flush contaminated area with plenty of water.

#### 6.4. Reference to other sections

- Reference to other sections** For personal protection, see Section 8. For waste disposal, see Section 13. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Usage precautions** The information contained in this section has been extracted from the hazardous substance/substances Exposure Scenario. Do not handle until all safety precautions have been read and understood. Wear protective clothing as described in Section 8 of this safety data sheet. Do not get in eyes, on skin, or on clothing. Do not breathe fume. Do not breathe dust. May be corrosive to metals. This product is not to be used under conditions of poor ventilation. Keep out of the reach of children. **DO NOT MIX WITH ANY OTHER DRAIN CLEANING CHEMICALS.** Never add water directly to this product as it may cause a vigorous reaction or boiling. Always dilute by carefully pouring the product into water.
- Advice on general occupational hygiene** Do not eat, drink or smoke when using this product. Take off immediately all contaminated clothing and wash it before reuse. Wash after use and before eating, smoking and using the toilet. Warn cleaning personnel of any hazardous properties of the product.

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

- Storage precautions** Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep locked up and out of the reach of children. Store away from incompatible materials (see Section 10). When exposed to air, this product will absorb moisture.
- Storage class** Corrosive storage.

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### 7.3. Specific end use(s)

<b>Specific end use(s)</b>	Heavy Duty Cleaning Product. For unblocking waste water drains and pipes.
<b>Usage description</b>	Always follow on pack instructions when using this product. Keep out of reach of children. Keep containers closed when not in use. ALWAYS ADD CAUSTIC SODA TO WATER AND NEVER ADD WATER TO THE CAUSTIC SODA.

### SECTION 8: Exposure Controls/personal protection

#### 8.1. Control parameters

##### Occupational exposure limits

Short-term exposure limit (15-minute): WEL 2 mg/m<sup>3</sup>

WEL = Workplace Exposure Limit

<b>Ingredient comments</b>	Duration and Frequency of use: 8 hours/day, 200 days/year Physical form of product in which the substance is contained. Solid Concentration of substance/s in mixture. >=100% The information quoted is taken from the hazardous ingredients Exposure Scenario (ES).
<b>DNEL</b>	Data taken from the suppliers MSDS. Workers - Inhalation; Long term local effects: 1 mg/m <sup>3</sup> Consumer - Inhalation; Long term local effects: 1 mg/m <sup>3</sup>
<b>PNEC</b>	A generic PNEC cannot be derived from single-species toxicity data for NaOH, as the pH of natural waters as well as the buffer capacity of natural waters show considerable differences and aquatic organisms/ecosystems are adapted to these specific natural conditions, resulting in different pH optima and pH ranges that are tolerated.

#### 8.2. Exposure controls

##### Protective equipment



##### Appropriate engineering controls

All handling should only take place in well-ventilated areas. Good general ventilation should be adequate to control worker exposure to airborne contaminants.

##### Personal protection

Protective engineering solutions should be implemented and in use before Personal Protective Equipment (PPE) is considered. Consumer exposure: Acute/short term exposure was assessed only for the most critical use: Consexpo and SprayExpo were used to estimate exposure. The calculated short-term exposure of 0.3 – 1.6 mg/m<sup>3</sup> is slightly higher than the long term DNEL for inhalation of 1 mg/m<sup>3</sup> but smaller than the short term occupational exposure limit of 2 mg/m<sup>3</sup>. Furthermore, Caustic Soda will be rapidly neutralised as a result of its reaction with CO<sub>2</sub> (or other acids).

##### Eye/face protection

Wear EN 166 approved chemical safety goggles where eye exposure is reasonably probable.

##### Hand protection

To protect hands from chemicals, gloves should comply with European Standard EN374. The selected gloves should have a breakthrough time of at least 480 hours. For exposure up to 8 hours, wear gloves made of the following material: Butyl rubber. Nitrile rubber. Polyvinyl chloride (PVC).

##### Other skin and body protection

Given the identified use of the product additional skin and body protection should not be required.

##### Respiratory protection

If used in accordance with section 7 of this MSDS the use of respiratory protection should not be required. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Wear a respirator fitted with the following cartridge: Particulate filter, type P2.

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<b>Thermal hazards</b>	WARNING When caustic soda is mixed with water it create an exothermic reaction that results in the water heating up. Users are to ensure that a suitable and sufficient container usch as a bucket with handle is used when mixing.
<b>Environmental exposure controls</b>	Keep container tightly sealed when not in use. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions. Technical on site conditions and measures to reduce or limit discharges, air emissions and releases to soil: The main use of this product is to unblock drains. The consumer uses relates to already diluted products which will further be neutralized quickly in the sewer, well before reaching a WWTP or surface water.

### SECTION 9: Physical and Chemical Properties

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

<b>Appearance</b>	Crystalline solid.
<b>Colour</b>	Off-white.
<b>Odour</b>	No characteristic odour.
<b>Odour threshold</b>	No specific test data are available.
<b>pH</b>	pH (concentrated solution): >12
<b>Melting point</b>	323°C REACH dossier information.
<b>Initial boiling point and range</b>	1388°C @ 101.325 kPa REACH dossier information.
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not available.
<b>Evaporation factor</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	Not applicable.
<b>Vapour pressure</b>	1 Pa @ 513°C REACH dossier information.
<b>Vapour density</b>	~ 1.38 Substance suppliers data
<b>Relative density</b>	~ 2.13 @ 20°C REACH dossier information.
<b>Solubility(ies)</b>	1260 g/l water @ 20°C Substance suppliers data
<b>Partition coefficient</b>	No specific test data are available.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition Temperature</b>	No specific test data are available.
<b>Viscosity</b>	0.997 mPa s (dynamic) 25 °C concentration: 0.5 mol/L REACH dossier information.
<b>Explosive properties</b>	No specific test data are available.
<b>Explosive under the influence of a flame</b>	Not considered to be explosive.
<b>Oxidising properties</b>	Not available.
<b>Comments</b>	Information given is applicable to the product in its ready-to-use form. Information declared as "Not available" or "Not applicable" is not considered to be relevant to the implementation of the proper control measures.

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### 9.2. Other information

**Volatile organic compound** This product contains a maximum VOC content of 0 %.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

**Reactivity** Potential for exothermic hazard  
- May be corrosive to metals.

#### 10.2. Chemical stability

**Stability** Stable at normal ambient temperatures and when used as recommended.

#### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** Reacts violently with water. Reacts violently with strong acids. Always dilute by carefully pouring the product into water.

#### 10.4. Conditions to avoid

**Conditions to avoid** Avoid freezing. Avoid the following conditions: Long storage and large quantities. Moisture

#### 10.5. Incompatible materials

**Materials to avoid** Acids. Aluminium. Other metals or alloys. Oxidising agents. Water, moisture. May be corrosive to metals. Do not mix with other household chemical products. Never add water directly to this product as it may cause a vigorous reaction or boiling. Always dilute by carefully pouring the product into water.

#### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Hydrogen.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

**Toxicological effects** Caustic Soda (Sodium hydroxide) is strongly irritating and corrosive. It can cause severe burns and permanent damage to any tissue that it comes in contact with. The extent of damage to the gastrointestinal tract may not be clear until several hours after ingestion. Inhaled sodium hydroxide can cause swelling of the larynx and an accumulation of fluid in the lungs. Contact with 25–50% solutions produces immediate irritation, while after contact with solutions of 4% or less, irritation may not develop for several hours. It may not be possible to correctly ascertain the degree of damage to eyes for up to 72 hours after exposure.

#### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 2,000.1

**Species** Rabbit

**Notes (oral LD<sub>50</sub>)** The supplier does not quote any data other than not classified as hazardous for this endpoint therefore an estimated figure has been used which corresponds to the classification.

**ATE oral (mg/kg)** 2,000.1

#### Acute toxicity - dermal

**Acute toxicity dermal (LD<sub>50</sub> mg/kg)** 2,000.1

**Species** Rabbit

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<b>Notes (dermal LD<sub>50</sub>)</b>	The Substance supplier does not quote any data other than not classified as hazardous for this endpoint therefore an estimated figure has been used which corresponds to the classification.
<b>ATE dermal (mg/kg)</b>	2,000.1
<b><u>Acute toxicity - inhalation</u></b>	
<b>Acute toxicity inhalation (LC<sub>50</sub> dust/mist mg/l)</b>	5.1
<b>Species</b>	Rat
<b>ATE inhalation (dusts/mists mg/l)</b>	5.1
<b><u>Skin corrosion/irritation</u></b>	
<b>Animal data</b>	Corrosive to skin. Sodium hydroxide was applied to the abdomens of 20 rats. Afterwards the area was washed with 500 ml distilled water starting 1, 10 and 30 minutes postinjury. After injury the subcutaneous tissue pH had not recovered to the pre-experimental level by the 90th minute. When washing started within 1 minute of injury the tissue pH value did not exceed 8.00. Washing had no effect when the delay between injury and the start of washing was 10 and 30 minutes. REACH dossier information.
<b><u>Serious eye damage/irritation</u></b>	
<b>Serious eye damage/irritation</b>	Risk of serious damage to eyes. Corrosivity to eyes is assumed.
<b><u>Respiratory sensitisation</u></b>	
<b>Respiratory sensitisation</b>	Based on available data the classification criteria are not met.
<b><u>Skin sensitisation</u></b>	
<b>Skin sensitisation</b>	Patch testing for 24 hours with visual scoring being recorded by the subjective evaluation method and by the transepidermal water loss method. After the seventh day reading sodium hydroxide (0.125%) was re-applied to all pretested sites and reading was performed on the next day. Based on available data the classification criteria are not met. Not sensitising.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	Ames test: Negative. REACH dossier information. Based on available data the classification criteria are not met.
<b>Genotoxicity - in vivo</b>	Chromosome aberration: Negative. Based on available data the classification criteria are not met. REACH dossier information.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	Scientifically unjustified. REACH dossier information.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	REACH dossier information. Based on available data the classification criteria are not met.
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>STOT - single exposure</b>	Based on available data the classification criteria are not met. Supplier's information.
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>STOT - repeated exposure</b>	Based on available data the classification criteria are not met. Supplier's information.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Not anticipated to present an aspiration hazard, based on chemical structure.



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<b>Inhalation</b>	Inhalation of sodium hydroxide is immediately irritating to the respiratory tract. Swelling or spasms of the larynx leading to upper-airway obstruction and asphyxia can occur after high-dose inhalation. Inflammation of the lungs and an accumulation of fluid in the lungs may also occur.
<b>Ingestion</b>	Ingestion of sodium hydroxide can cause spontaneous vomiting, chest and abdominal pain, and difficulty swallowing with drooling. Corrosive injury to the mouth, throat, esophagus, and stomach is extremely rapid and may result in perforation, hemorrhage, and narrowing of the gastrointestinal tract.
<b>Skin contact</b>	Skin contact with solid sodium hydroxide or its concentrated solutions can cause severe burns with deep ulcerations. Burns appear soft and moist and are very painful. Although contact with concentrated solutions causes pain and irritation within 3 minutes, contact with dilute solutions may not cause symptoms for several hours.
<b>Eye contact</b>	Eye exposure may produce diffuse or localized blood vessel clots and an accumulation of fluid in the eye. Softening, sloughing, and ulcerations of the cornea may occur. Ulcerations may continue to progress for many days. Severe injury can lead to clouding of the eye surface and blindness.
<b>Acute and chronic health hazards</b>	Chronic exposure to dusts or mists of sodium hydroxide may lead to ulceration of the nasal passages. Chronic skin exposures can lead to dermatitis. Ingestion may lead to perforation of the gastrointestinal tract or stricture formation.
<b>Route of exposure</b>	Inhalation Ingestion Skin and/or eye contact
<b>Target organs</b>	Eyes Gastro-intestinal tract Skin

### SECTION 12: Ecological Information

<b>Ecotoxicity</b>	There is no reliable Ecotoxicity data available on the REACH Registration portal or the suppliers MSDS. The information below is extracted from the Rapporteur risk assessment for sodium hydroxide 2008. The report provides a summary, with conclusions, of the risk assessment report of the substance sodium hydroxide that has been prepared by Portugal in the context of Council Regulation (EEC) No. 793/93 on the evaluation and control of existing substances.
<b>Aquatic Compartment</b>	The results of single-species acute toxicity tests with NaOH include tests with fish and invertebrates; all but one test were performed with freshwater species. The tests with fish resulted in acute LC50 values and toxic / lethal concentrations ranging from 35 to 189 mg/l. The results for invertebrates are very similar, with a range of 33 to 450 mg/l. There are no data for algae and higher aquatic plant species. For chronic toxicity of NaOH only one limited study is available, with fish (guppy) <i>Lebistes reticulatus</i> . This study clearly showed effects on survival, growth and reproduction of fish at long-term exposure to NaOH concentrations of 25 mg/l and higher. The available data indicate that NaOH concentrations of 20 to 40 mg/l may be acutely toxic to fish and invertebrates. Data on pH-increases due to the addition of these amounts of NaOH in the used test waters are lacking. In waters with a relatively low buffering capacity, NaOH concentrations of 20-40 mg/l may result in a pH increase with one to several pH units. The data on the pH tolerance of fish show that an increase in pH value from around 8.5 to 9.5-10.5. i.e. an increase with 1 to 2 pH units results in acute lethality in fish that were not acclimatized to intermediate values. The data further show that pH values of 9-10 may be toxic or lethal to some fish species and above a pH value of 10 mortalities may be expected for many species exposed for a prolonged period.

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### Effects on Microorganisms

In a test system with the freshwater ciliated protozoan *Tetrahymena thermophila*, NaOH is used as a positive control. At the NOEC (EC10) of 167 mg/l the calculated pH value was 11.6, assuming that the dilution medium has no buffer capacity.

The inhibition of the bioluminescence of the marine bacterium *Photobacterium phosphoreum* by NaOH has been measured with the Microtox test system, resulting in a 15-minutes EC50 of 22 mg/l.

### 12.1. Toxicity

#### Toxicity

Data below is taken from the substance exposure scenario. Environmental exposure: The aquatic effect and risk assessment only deals with the effect on organisms/ecosystems due to possible pH changes related to OH<sup>-</sup> discharges, as the toxicity of the Na<sup>+</sup> ion is expected to be insignificant compared to the (potential) pH effect. The high water solubility and very low vapour pressure indicate that NaOH will be found predominantly in water. When the risk management measures related to the environment are implemented, there is no exposure to the activated sludge of a sewage treatment plant and there is not exposure of the receiving surface water. The sediment compartment is not considered, because it is not considered relevant for NaOH. If emitted to the aquatic compartment, sorption to sediment particles will be negligible. Significant emissions to air are not expected due to the very low vapour pressure of NaOH. If emitted to air as an aerosol in water, NaOH will be rapidly neutralised as a result of its reaction with CO<sub>2</sub> (or other acids). Significant emissions to the terrestrial environment are not expected either. The sludge application route is not relevant for the emission to agricultural soil, as no sorption of NaOH to particulate matter will occur in STPs/WWTPs. If emitted to soil, sorption to soil particles will be negligible. Depending on the buffer capacity of the soil, OH<sup>-</sup> will be neutralised in the soil pore water or the pH may increase.

### 12.2. Persistence and degradability

### 12.3. Bioaccumulative potential

**Bioaccumulative potential** Bioaccumulation is unlikely.

**Partition coefficient** No specific test data are available.

### 12.4. Mobility in soil

### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** This substance is considered not to be PBT and vPvB.

### 12.6. Other adverse effects

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### General information

The generation of waste should be minimised or avoided wherever possible. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Waste is classified as hazardous waste. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor.

#### Disposal methods

Place waste in labelled, sealed containers. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of the local water authority. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions. Waste packaging should be collected for reuse or recycling.

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### Waste class

The following EU Waste Catalogue codes are applicable to this product: Any unused product that becomes waste it should be disposed off as waste code 06-02-04 (Sodium and Potassium Hydroxide). Empty plastic containers can be disposed of using EU Waste code 15 01 02 plastic packaging. These codes have been assigned based on the actual composition of the product as supplied. If mixed with other wastes, the waste codes quoted may not be applicable.

### SECTION 14: Transport information

#### General

The limited quantity size for this product is 1kg. For this to apply goods shall be packed in inner packagings placed in suitable outer packagings. The total gross mass of the package shall not exceed 30kg. If shrink or stretch wrapped trays are used then the total gross mass of the package shall not exceed 20kg.

#### 14.1. UN number

UN No. (ADR/RID)	1823
UN No. (IMDG)	1823
UN No. (ICAO)	1823
UN No. (ADN)	1823

#### 14.2. UN proper shipping name

Proper shipping name (ADR/RID)	SODIUM HYDROXIDE, SOLID
Proper shipping name (IMDG)	SODIUM HYDROXIDE, SOLID
Proper shipping name (ICAO)	SODIUM HYDROXIDE, SOLID
Proper shipping name (ADN)	SODIUM HYDROXIDE, SOLID

#### 14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID classification code	C6
ADR/RID label	8
IMDG class	8
ICAO class/division	8
ADN class	8

#### Transport labels



#### 14.4. Packing group

ADR/RID packing group	II
IMDG packing group	II
ADN packing group	II
ICAO packing group	II

#### 14.5. Environmental hazards

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### Environmentally hazardous substance/marine pollutant

No.

#### 14.6. Special precautions for user

EmS	F-A, S-B
ADR transport category	2
Emergency Action Code	2W
Hazard Identification Number (ADR/RID)	80
Tunnel restriction code	(E)

#### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

### SECTION 15: Regulatory information

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

<b>National regulations</b>	<p>Users of this product are reminded of their duties under the current Control of Substances Hazardous to Health Regulations and a suitable and sufficient assessment of all the risk should be undertaken before using this product. The guidelines given in the HSE publication COSHH ESSENTIALS - Easy Steps To Control Chemicals gives sound advice for deciding safe working control measures.</p> <p>Control of Substances Hazardous to Health Regulations 2002 (as amended). EH40/2005 Workplace exposure limits. Health and Safety at Work etc. Act 1974 (as amended). The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"]. The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).</p>
<b>EU legislation</b>	<p>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Regulation (EC) No 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents (as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).</p>
<b>Guidance</b>	Workplace Exposure Limits EH40.
<b>Authorisations (Title VII Regulation 1907/2006)</b>	No specific authorisations are known for this product.
<b>Restrictions (Title VIII Regulation 1907/2006)</b>	No specific restrictions on use are known for this product.

#### 15.2. Chemical safety assessment

A chemical safety assessment has been carried out. An exposure scenario has been prepared for the hazardous ingredient. The relevant information has been abstracted and incorporated into the main body of this SDS.

## BARTOLINE - Caustic Soda

### SECTION 16: Other information

<b>Abbreviations and acronyms used in the safety data sheet</b>	<p>DNEL Derived no effect level</p> <p>GHS Globally Harmonised System</p> <p>PBT Persistent, bioaccumulative and toxic</p> <p>STOT-RE Specific target organ toxicity - Repeated exposure</p> <p>vPvB Very persistent and very bioaccumulative</p> <p>Na Sodium</p> <p>NaOH Caustic Soda</p> <p>OH Hydroxide</p> <p>STP Sewerage Treatment Plant</p> <p>WWTP Waste Water Treatment Plant</p>
<b>General information</b>	<p>Exposure estimation and reference to its source: Worker/professional exposure: Caustic Soda is a corrosive substance. For the handling of corrosive substances and formulations, immediate dermal contacts occur only occasionally and it is assumed that repeated daily dermal exposure can be neglected. Therefore, dermal exposure to Caustic Soda was not quantified.</p> <p>Caustic Soda is not expected to be systemically available in the body under normal handling and use conditions and therefore systemic effects of Caustic Soda after dermal or inhalation exposure are not expected to occur. The ECETOC TRA tool has been used to estimate the inhalation exposure (see below).</p> <p>It was assumed that there is no local exhaust ventilation and no respiratory protection unless specified otherwise. The duration of exposure was set at more than 4 hours per day as a worst-case assumption and professional use was specified where relevant as a worst-case assumption. For the solid, the low dustiness class was selected because Caustic Soda is very hygroscopic. Only the most relevant PROCs were considered in the assessment PROC 19 Hand-mixing with intimate contact and only PPE available. 0.5mgm<sup>3</sup></p>
<b>Training advice</b>	<p>The information on directions for use can be found on the product label. It is important to ensure that anyone using this product in the workplace has been adequately trained and in particular: The use of personal protective equipment, methods of cleaning up and disposal of waste. The basic first aid arrangements.</p>
<b>Revision comments</b>	<p>DUE TO CHANGE OF CLASSIFICATION DATABASE THE REVISION NUMBERING HAS BEEN RESET. You should therefore look at the revision date rather than the revision number to ensure you have the most up to date version. NOTE: Lines within the margin indicate significant changes from the previous revision. The only changes in this version are reformatting.</p>
<b>Issued by</b>	Product Compliance Assistant
<b>Revision date</b>	07/12/2018
<b>Revision</b>	4
<b>Supersedes date</b>	26/11/2018
<b>SDS number</b>	4745
<b>Hazard statements in full</b>	<p>H290 May be corrosive to metals.</p> <p>H314 Causes severe skin burns and eye damage.</p> <p>H318 Causes serious eye damage.</p>

## BARTOLINE - Caustic Soda

The information contained in this data sheet is provided in accordance with the requirements of the Regulation (EC) No 1907/2006 Annex II as amended by Regulation (EU) 2015/830 and Regulation (EC) No 1272/2008 (CLP). The product should not be used for purposes other than those shown in Section 1.2. As the specific conditions of use are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with. The information contained in this safety data sheet is based on the present knowledge and the current EU and UK Legislation. It provides guidance on health, safety and environmental aspects of the product and should not be taken as a product specification. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.