

SAFETY DATA SHEET

Acinor**Caustic Soda 5-50%****Acinor**

The safety data sheet is in accordance with Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

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

Date issued	18.04.2008
Revision date	12.07.2021

1.1. Product identifier

Product name	Caustic Soda 5-50%
Synonyms	Sodium hydroxide solution 25%, Sodium hydroxide solution 32%, Sodium hydroxide solution 46%, Sodium hydroxide solution 50%, Caustic soda liquid
Extended SDS with ES incorporated, comments	Exposure Scenario available.

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

Use of the substance / preparation	pH regulation. Production of alkaline soap. Refining of oils.
Consumer use	No

1.3. Details of the supplier of the safety data sheet**Distributor**

Company name	Acinor AS
Office address	Titangt. 13, NO-1630 Gamle Fredrikstad
Postal address	Titangaten 13
Postcode	1630
City	Gamle Fredrikstad
Country	Norway
Telephone number	69384082
Fax	69384084
Email	post@acinor.no
Website	www.acinor.no
Enterprise No.	NO 984 648 324 MVA

1.4. Emergency telephone number

Emergency telephone	Telephone number: +47 22 59 13 00 Description: Norwegian Poison Information Center
	Telephone number: 112 or 999 Description: Ambulance

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]	Skin Corr. 1A; H314 Eye Dam. 1; H318
Substance / mixture hazardous properties	Causes severe burns and eye damage.

2.2. Label elements

Hazard pictograms (CLP)



Composition on the label	Sodium hydroxide
Signal word	Danger
Hazard statements	H314 Causes severe skin burns and eye damage.
Precautionary statements	P260 Do not breathe dust / fume / gas / mist / vapours / spray. 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): Remove / Take off immediately all contaminated clothing. Rinse skin with water / 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 or doctor / physician.

2.3. Other hazards

PBT / vPvB	PBT/vPvB assessment has not been performed.
Other hazards	None of the components are listed on ECHAs Endocrine disruptor assessment list.

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Substance	Identification	Classification	Contents	Notes
Sodium hydroxide	CAS No.: 1310-73-2 EC No.: 215-185-5 Index No.: 011-002-00-6 REACH Reg. No.: 01-2119457892-27	Skin Corr. 1A; H314;	5 – 50 %	

Description of the mixture	Aqueous solution.
Substance comments	See section 16 for explanation of hazard statements (H) listed above.

SECTION 4: First aid measures

4.1. Description of first aid measures

General	Emergency telephone number: see section 1.4. In case of unconsciousness or severe accidents, call 112.
Inhalation	Rinse nose and mouth with water. Fresh air and rest. Get medical attention. For breathing difficulties oxygen may be necessary.
Skin contact	Remove contaminated clothing. Wash the skin immediately with soap and water. Get medical attention immediately! Chemical burns must be treated by a physician. Wash contaminated clothes before reuse.
Eye contact	Remove contact lenses and open eyes wide apart. Promptly rinse eyes with plenty of water (tempered at 20-30°C) for at least 30 minutes. Transport to physician. Keep on flushing during transport.
Ingestion	Immediately rinse mouth and drink plenty of water (200-300 ml). Liquid can also be given as milk or cream. Never give liquid to an unconscious person. Do not induce vomiting. Get medical attention immediately!

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

General symptoms and effects	Treat as chemical burns/scalding. Risk of perforation of the esophagus. Hospital treatment is required.
Acute symptoms and effects	The chemical is corrosive to the eyes and may cause permanent damage. Symptoms such as strong burning, tearing/watering, redness and blurred vision may occur. In severe cases, there is a risk of visual damage/blindness. Burning pain and severe corrosive skin damage. Forms blisters and can cause ulceration. Causes burns if swallowed. Causes burning sensation in the mouth, throat and esophagus. May cause serious permanent damage.

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

Medical monitoring for delayed effects	Monitor for at least 48 hours.
Other information	Treat symptomatically. No specific information from the manufacturer.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Dry-powder, Carbon dioxide (CO ₂), alcohol-resistant foam.
Improper extinguishing media	Do not use water jet.

5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	The chemical is not classified as flammable. Reacts violently with water. May form toxic or explosive vapours in presence of certain metals. Explosive, toxic gas can be formed upon contact with trichlorethylene.
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5.3. Advice for firefighters

Personal protective equipment	Use compressed air equipment when the chemical is involved in fire. In case of evacuation, an approved protection mask should be used. See also section 8.
Other information	Containers close to fire should be removed immediately or cooled with water. Water used for fire extinguishing, which has been in contact with the product, may be corrosive. Extinguishing water must not be discharged into drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal protection measures	Beware! The product is corrosive. Provide adequate ventilation. Avoid inhalation of dust. Avoid contact with skin and eyes. Use protective equipment as referred to in section 8. Use protective equipment as referred to in section 8.
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6.2. Environmental precautions

Environmental precautionary measures	Do not allow to enter into sewer, water system or soil.
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6.3. Methods and material for containment and cleaning up

Clean up	Absorb in vermiculite, dry sand or earth and place into containers. Collect in a suitable container and dispose as hazardous waste according to section 13. Wash contaminated area with water and allow to dry.
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6.4. Reference to other sections

Other instructions	See also sections 8 and 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling	Use protective equipment as referred to in section 8. Provide adequate ventilation. Avoid direct contact. Avoid inhalation of vapours. Avoid spilling, skin and eye contact. Change contaminated clothing. Use work methods which minimize aerosol production. Never add water directly to this product – may cause vigorous reaction/boiling. Always dilute by carefully pouring the product into the water. Beware! The product is corrosive.
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Protective safety measures

Advice on general occupational hygiene	Wash hands at the end of each work shift and before eating, smoking and using the toilet. Do not eat, drink or smoke during work. Wash contaminated clothing before reuse.
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7.2. Conditions for safe storage, including any incompatibilities

Storage	Store dry and cool in a well ventilated area. Store in tightly closed container. Corrosive storage. Protect from sunlight.
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Conditions for safe storage

Requirements for storage rooms and vessels	Suitable containers: Acid resistant steel. Unsuitable containers: aluminium. Zinc. Lead. Tin.
Advice on storage compatability	Keep away from: Acids. Water/moisture.

7.3. Specific end use(s)

Specific use(s)	See section 1.2.
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SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Substance	Identification	Exposure limits	TWA Year
Sodium hydroxide	CAS No.: 1310-73-2	Limit value (short term) Value: 2 mg/m ³	
Control parameters comments	References (laws/regulations): Norwegian regulation on exposure limits: "FOR-2011-12-06-1358 Forskrift om tiltaksverdier og grenseverdier for fysiske og kjemiske faktorer i arbeidsmiljøet samt smitterisikogrupper for biologiske faktorer (forskrift om tiltaks- og grenseverdier)".		

8.2. Exposure controls

Precautionary measures to prevent exposure

Technical measures to prevent exposure	Provide adequate ventilation. The personal protective equipment must be CE-marked and the latest version of the standards shall be used. The protective equipment and the specified standards recommended below are only suggestions, and should be selected on advice from the supplier of such equipment. A risk assessment of the work place/work activities (the actual risk) may lead to other control measures. The protection equipment's suitability and durability will depend on application.
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Eye / face protection

Eye protection equipment	Description: Wear splash-proof eye goggles to prevent any possibility of eye contact. Reference to relevant standard: EN 166 (Personal eye-protection. Specifications).
Additional eye protection measures	Eye wash facilities should be available at the work place. Either a fixed eye wash facility connected to the drinking water (preferably warm water) or a portable disposable unit.

Hand protection

Suitable materials	Nitrile. Butyl rubber. Polyvinyl chloride (PVC). Viton rubber (fluor rubber).
Unsuitable materials	Leather.
Breakthrough time	Value: > 480 minute(s)
Thickness of glove material	Comments: Butyl rubber, PVC: 0,5 mm. Nitrile rubber, Viton rubber: 0,35-0,4 mm.

Hand protection equipment	Description: Use chemical resistant gloves. The gloves abilities may vary among the different glove manufacturers. Use gauntlet type rubber gloves. Reference to relevant standard: EN ISO 374 (Protective gloves against chemicals and micro-organisms). EN 420 (Protective gloves – General requirements and test methods).
Additional hand protection measures	Change gloves frequently!

Skin protection

Unsuitable protective clothing	Leather.
Recommended protective clothing	Description: Wear appropriate protective clothing to protect against skin contact.
Additional skin protection measures	Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes wet or contaminated. Emergency shower should be available at the workplace.

Respiratory protection

Recommended respiratory protection	Description: In case of inadequate ventilation or risk of inhalation of vapours, use suitable respiratory equipment with combination filter (type A/P3). Wear air-supplied mask in confined areas. Reference to relevant standard: EN 14387 (Respiratory protective devices. Gas filter(s) and combined filter(s). Requirements, testing, marking). EN 149.
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Appropriate environmental exposure control

Environmental exposure controls	Do not allow to enter into sewer, water system or soil.
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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Fluid.
Colour	Colourless.
Odour	No characteristic odour.
Odour limit	Comments: Not determined.
pH	Status: In delivery state Value: > 14 Comments: Concentrated solution.
Melting point / melting range	Comments: Not known.
Boiling point / boiling range	Value: ~ 145 °C
Flash point	Comments: Not relevant.
Evaporation rate	Comments: Not determined.
Flammability	Not relevant, see flash point.
Explosion limit	Comments: Not relevant.

Vapour pressure	Value: 0,4 kPa Temperature: 40 °C
Vapour density	Comments: Not determined.
Relative density	Value: 1,63
Solubility	Medium: Water Comments: Soluble.
Partition coefficient: n-octanol/ water	Comments: Not relevant. Inorganic substance.
Auto-ignition temperature	Comments: Not determined.
Decomposition temperature	Comments: Not known.
Viscosity	Comments: Not known.
Explosive properties	Not determined.
Oxidising properties	Not determined.

9.2. Other information

Other physical and chemical properties

Physical and chemical properties	Freezing point: -12°C
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Reactive with the materials listed in Section 10.5.
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10.2. Chemical stability

Stability	Stable under normal temperature conditions and recommended use. The substance is hygroscopic and will absorb water by contact with the moisture in the air.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Arise in contact with incompatible materials (see section 10.5) and/or under inappropriate conditions (see section 10.4). In contact with metals, hydrogen gas may be formed.
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10.4. Conditions to avoid

Conditions to avoid	Protect from direct sunlight. Moisture.
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10.5. Incompatible materials

Materials to avoid	Acids. Water, steam, water mixtures. Aluminium. Lead. Zinc. Tin.
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10.6. Hazardous decomposition products

Hazardous decomposition products	None under normal conditions. See also section 5.2.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	Type of toxicity: Acute Effect tested: LD50 Route of exposure: Oral Value: > 500 mg/kg Species: Rabbit Comments: 25% solution.
	Type of toxicity: Acute Effect tested: LD50 Route of exposure: Dermal Value: 1350 mg/kg Species: Rabbit

Other information regarding health hazards

Assessment of acute toxicity, classification	Based on available data, the classification criteria are not met.
Assessment of skin corrosion / irritation, classification	Corrosive to skin.
Assessment of eye damage or irritation, classification	Causes serious eye damage.
Assessment of respiratory sensitisation, classification	Based on available data, the classification criteria are not met.
Assessment of skin sensitisation, classification	Based on available data, the classification criteria are not met.
Assessment of germ cell mutagenicity, classification	Based on available data, the classification criteria are not met.
Assessment of carcinogenicity, classification	Based on available data, the classification criteria are not met.
Assessment of reproductive toxicity, classification	Based on available data, the classification criteria are not met.
Assessment of specific target organ toxicity - single exposure, classification	Based on available data, the classification criteria are not met.
Assessment of specific target organ toxicity - repeated exposure, classification	Based on available data, the classification criteria are not met.
Assessment of aspiration hazard, classification	Based on available data, the classification criteria are not met.

Symptoms of exposure

In case of ingestion	Causes burns if swallowed. Causes burning sensation in the mouth, throat and esophagus. May cause serious permanent damage. Symptoms are severe burning pains in mouth, throat and stomach.
In case of skin contact	Strongly corrosive. May cause deep tissue damage. Cause blisters and burns.
In case of inhalation	Vapours are corrosive. After 24-36 hours, injured persons may develop serious

	shortness of breath and lung oedema. High concentrations may cause severe lung damage.
In case of eye contact	Strongly corrosive. Causes severe burns and serious eye damage. Immediate first aid is imperative. Symptoms such as strong burning, tearing/watering, redness and blurred vision may occur. In severe cases, there is a risk of visual damage/blindness.

11.2 Other information

Other information	None of the components are listed on ECHAs Endocrine disruptor assessment list.
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SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity, fish	<p>Value: 180 mg/l Test duration: 24 hour(s) Species: Carp Method: LC50 Comments: Value: 125 mg/l Method of testing: LC50 Fish, species: Mosquito fish Duration: 96 hours</p> <p>Value: 99 mg/l Method of testing: LC50 Fish, species: Bluegill Duration: 48 hours</p>
Ecotoxicity	The chemical is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills may be potentially hazardous.

12.2. Persistence and degradability

Persistence and degradability description/evaluation	The chemical consists mainly of inorganic materials which are not biodegradable.
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12.3. Bioaccumulative potential

Bioaccumulation, comments	Not expected to bioaccumulate.
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12.4. Mobility in soil

Mobility	Soluble in water.
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12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	PBT/vPvB assessment has not been performed.
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12.6. Endocrine disrupting properties

Endocrine disrupting properties	None of the components are listed on ECHAs Endocrine disruptor assessment list.
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12.7. Other adverse effects

Additional ecological information	Do not allow to enter into sewer, water system or soil. Alkalies cause increased pH values in the water. A high pH value harms aquatic organisms.
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate methods of disposal for the chemical	Disposed of as hazardous waste by approved contractor. The waste code (EWC-Code) is intended as a guide. The code must be chosen by the user, if the use differs from the one mentioned below.
EWC waste code	EWC waste code: 060204 sodium and potassium hydroxide Classified as hazardous waste: Yes
NORSAS	7132 Inorganic bases
Other information	Do not empty into drains.

SECTION 14: Transport information

Dangerous goods	Yes
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14.1. UN number

ADR/RID/ADN	1824
IMDG	1824
ICAO/IATA	1824

14.2. UN proper shipping name

Proper shipping name English ADR/RID/ADN	SODIUM HYDROXIDE SOLUTION
ADR/RID/ADN	SODIUM HYDROXIDE SOLUTION
IMDG	SODIUM HYDROXIDE SOLUTION
ICAO/IATA	SODIUM HYDROXIDE SOLUTION

14.3. Transport hazard class(es)

ADR/RID/ADN	8
Classification code ADR/RID/ADN	C5
IMDG	8
ICAO/IATA	8

14.4. Packing group

ADR/RID/ADN	II
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IMDG	II
ICAO/IATA	II

14.5. Environmental hazards

IMDG Marine pollutant	No
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14.6. Special precautions for user

Special safety precautions for user	Not relevant.
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14.7. Maritime transport in bulk according to IMO instruments

Product name	SODIUM HYDROXIDE SOLUTION
Ship type required	Data lacking.

Additional information

Hazard label ADR/RID/ADN	8
Hazard label IMDG	8
Hazard label ICAO/IATA	8

ADR/RID Other information

Tunnel restriction code	E
Transport category	2
Hazard No.	80

IMDG Other information

EmS	F-A, S-B
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SECTION 15: Regulatory information

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

References (laws/regulations)	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP-regulation) with later amendments. Regulation (EC) No 1907/2006 on the registration, evaluation, authorization and restriction of chemicals (REACH Regulation), with later amendments. The List of Wastes (England) (Amendment) Regulations 2005. (SI 2005 No. 895). The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009.
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15.2. Chemical safety assessment

Chemical safety assessment performed	No
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SECTION 16: Other information

Supplier's notes	The information contained in this SDS must be made available to all those who handle the product.
List of relevant H-phrases (Section 2 and 3)	H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage.
CLP classification, comments	Calculation method.
Key literature references and sources for data	Suppliers Safety data sheet dated: 11.2014
Abbreviations and acronyms used	ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road EWC: European Waste Code (a code from the EU's common classification system for waste) IATA: The International Air Transport Association ICAO: The International Civil Aviation Organisation IMDG: The International Maritime Dangerous Goods Code LC50: Median concentration lethal to 50% of a test population. LD50: Lethal dose, is the amount of a substance given to a group of test animals, which causes the death of 50%. PBT: Persistent, Bioaccumulative and Toxic RID: The Regulations concerning the International Carriage of Dangerous Goods by Rail vPvB: very Persistent and very Bioaccumulative
Information added, deleted or revised	Relevant changes compared to the previous version of the safety data sheet are indicated with verticle lines in the left margin.
Checking quality of information	This SDS is quality controlled by Kiwa Kompetanse AS in Norway, certified according to the Quality Management System requirements specified in ISO 9001:2015.
Version	4
Prepared by	Kiwa Kompetanse AS, Norway by Sharon M. Løver