

Safety Data Sheet

acc. to OSHA HCS

Printing date 10/22/2019

Version 4


Reviewed on 09/11/2019

1 Identification

- **Product identifier**
- **Trade name: Alfa Caus**
- **Article number:** 3180126126, 3180126172, 3284000606
- **Application of the substance / the mixture** Industrial cleaner
- **Details of the supplier of the safety data sheet**
- **Supplier:**
Alfa Laval Lund AB
Box 74
SE-221 00 Lund
Sweden
+46 46 36 65 00
info.se@alfalaval.com
- **Information department:**
For additional questions regarding safety data sheets please contact your local Alfa Laval Sales Company which you find on www.alfalaval.com or in safety data sheet under section 16: Other Informaion
- **Emergency telephone number:** US and Canada: 911

2 Hazard(s) identification

- **Classification of the substance or mixture**
Met. Corr.1 H290 May be corrosive to metals.
Skin Corr. 1A H314 Causes severe skin burns and eye damage.

- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**

- **Signal word** Danger
- **Hazard-determining components of labeling:**
sodium hydroxide
- **Hazard statements**
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
- **Precautionary statements**
P260 Do not breathe mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 If on skin (or hair): 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/doctor/.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

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Trade name: Alfa Caus· **vPvB:** Not applicable.

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3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture: consisting of the following components.

- **Dangerous components:**

CAS: 1310-73-2	sodium hydroxide Met. Corr.1, H290; Skin Corr. 1A, H314; Acute Tox. 4, H302	10-15%
CAS: 657-84-1	sodium toluene-4-sulphonate Skin Irrit. 2, H315; STOT SE 3, H335	2.5-10%

- **Additional information:**
<5% Non ionic tensides
Phosphonates

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Wash contaminated clothing before reuse.
Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air or oxygen; call for doctor.
- **After skin contact:**
After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.
Call a doctor immediately.
- **After eye contact:**
Rinse cautiously with water for 20 minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
- **After swallowing:**
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
Corrosive effects. Can cause permanent eye damage.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
Water
Foam
Fire-extinguishing powder
Carbon dioxide
Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** Not applicable.

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- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters** Cool endangered receptacles with water spray.
- **Protective equipment:**
Wear fully protective suit.
Wear self-contained respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
See Section 8 for information on personal protection equipment.
Wear protective equipment. Keep unprotected persons away.
Do not breathe vapour.
Do not get in eyes, on skin, or on clothing.
- **Environmental precautions:**
Do not allow to enter sewers/ surface or ground water.
Send for recovery or disposal in suitable receptacles.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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.
- **Protective Action Criteria for Chemicals**

· PAC-1:		
CAS: 1310-73-2	sodium hydroxide	0.5 mg/m ³
· PAC-2:		
CAS: 1310-73-2	sodium hydroxide	5 mg/m ³
· PAC-3:		
CAS: 1310-73-2	sodium hydroxide	50 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
When diluting, always stir the product into standing water, not water to product.
Ensure good ventilation/exhaustion at the workplace.
When using do not eat, drink or smoke.
See Section 8 for information on personal protection equipment.
Avoid contact with skin and eyes.
Ensure that washing facilities are available at the work place.
- **Information about protection against explosions and fires:** No special measures required.

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- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Keep container tightly closed.
Keep only in original container.
Store in a dry place.
- **Information about storage in one common storage facility:** Do not store together with acids.
- **Further information about storage conditions:**
Protect from frost.
Keep receptacle tightly sealed.
- **Specific end use(s)**
Industrial cleaner
Professional use only.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

CAS: 1310-73-2 sodium hydroxide

PEL	Long-term value: 2 mg/m ³
REL	Ceiling limit value: 2 mg/m ³
TLV	Ceiling limit value: 2 mg/m ³

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
No further data; see item 7.
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.
Use only in well-ventilated areas.
In case of insufficient ventilation, wear suitable respiratory equipment.
- **Breathing equipment:**
Filter P2



In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

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· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

Chloroprene rubber, CR

Natural rubber, NR

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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **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 protection:**



Face protection



Tightly sealed goggles

· **Body protection:**

Use protective suit.

Alkaline resistant protective clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· Form:	Fluid
· Color:	Yellowish
· Odor:	undistinguishable
· Odor threshold:	Not determined.

· pH-value at 20 °C (68 °F):	13-14
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· **Change in condition**

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	>100 °C (>212 °F)

· Flash point:	>100 °C (>212 °F)
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· Flammability (solid, gaseous):	Not applicable.
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure:	Not determined.
· Density at 20 °C (68 °F):	1.17 g/cm ³ (9.76365 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
VOC content:	0.00 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
Reacts with acids.
Forms heat.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions**
Violent reaction with water at high temperatures.
Corrosive action on metals.
Reacts with base metals forming hydrogen.
- **Conditions to avoid** Do not store together with acids.
- **Incompatible materials:** Store away from metals.
- **Hazardous decomposition products:** Poisonous gases/vapors

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11 Toxicological information

Information on toxicological effects

Acute toxicity:

CAS: 1310-73-2 sodium hydroxide

Oral	LD50	2,000 mg/kg (rat)
	LDLo	500 mg/kg (rabbit) (LDLo)

Primary irritant effect:

- on the skin: Strong caustic effect on skin and mucous membranes.

on the eye:

- Risk of serious damage to eyes.
- Strong caustic effect.
- Irritating effect.

- Sensitization:** Based on available data, the classification criteria are not met.

Additional toxicological information:

- Causes severe burns.

The product shows the following dangers according to internally approved calculation methods for preparations:

- Corrosive

- Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

Carcinogenic categories

IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

NTP (National Toxicology Program)

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

Toxicity

CAS: 1310-73-2 sodium hydroxide

EC50	>100 mg/L (daphnia) (OECD Guideline 202 (Daphnia sp. Acute Immobilisati))
LC50	189 mg/L (Fish) (OECD Guideline 203 (Fish, Acute Toxicity Test))
Germ Cell Mutagenicity (Bacterial mutation assay)	(Pseudomonas putida) (Bacterial Forward Mutation Assay)

- Aquatic toxicity:** No further relevant information available.

Persistence and degradability

- The surfactants contained in the product correspond to the legislation on the environmental compatibility of detergents and are biodegradable.

Behavior in environmental systems:

- Bioaccumulative potential** No further relevant information available.

- Mobility in soil** No further relevant information available.

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- **Ecotoxicological effects:**
- **Behavior in sewage processing plants:**
- **Type of test Effective concentration Method Assessment**
 1310-73-2 Sodium hydroxide: Short-term toxicity to aquatic invertebrates: Ceriodaphnia sp., Reliability: 2 (reliable with restrictions), Salinity: 500 µS/cm, Duration: 48 h, Endpoint: EC50, Effect concentration: 40.4 mg/L, Author: Warne M.St.J. and A.D. Schifko, Year: 1999, Title: Toxicity of Laundry Detergent Components to a Freshwater Cladoceran and their Contribution to Detergent Toxicity Bibliographic source: Ecotoxicology and Environmental Safety,44, 196-206.
- **Additional ecological information:**
- **General notes:**
 Water hazard class 1 (Self-assessment): 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 bodies of water or drainage ditch undiluted or unneutralized.
 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.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:**
 Rinse cautiously with water for several minutes.
 Packagings that cannot be cleansed are to be disposed of in the same manner as the product.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|--------------------------------|--|
| UN-Number | |
| DOT, ADR, IMDG, IATA | UN1824 |
| UN proper shipping name | |
| DOT | Sodium hydroxide solution mixture |
| ADR | 1824 SODIUM HYDROXIDE SOLUTION mixture |
| IMDG, IATA | SODIUM HYDROXIDE SOLUTION mixture |

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· **Transport hazard class(es)**

· **DOT**



· **Class**

8 Corrosive substances

· **Label**

8

· **ADR, IMDG, IATA**



· **Class**

8 Corrosive substances

· **Label**

8

· **Packing group**

· **DOT, ADR, IMDG, IATA**

II

· **Environmental hazards:**

· **Marine pollutant:**

No

· **Special precautions for user**

Warning: Corrosive substances

· **Danger code (Kemler):**

80

· **EMS Number:**

F-A,S-B

· **Segregation groups**

Alkalis

· **Stowage Category**

A

· **Segregation Code**

SG35 Stow "separated from" SGG1-acids

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **DOT**

· **Quantity limitations**

On passenger aircraft/rail: 1 L
On cargo aircraft only: 30 L

· **ADR**

· **Excepted quantities (EQ)**

Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

· **IMDG**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1824 SODIUM HYDROXIDE SOLUTION MIXTURE, 8, II

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15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

EU regulation (EC) no 1272/2008 (CLP)
 EC DIRECTIVE 2008/98/EC (waste)
 EU Regulation (EC) no.1907/2006 (REACH)
 (EC) nr 648/2004 (detergents)

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

CAS: 1310-73-2	sodium hydroxide	ACTIVE
CAS: 657-84-1	sodium toluene-4-sulphonate	ACTIVE

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



· **Signal word** Danger

· **Hazard-determining components of labeling:**

sodium hydroxide

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Hazard statements

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

Precautionary statements

P260 Do not breathe mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 If on skin (or hair): 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/doctor/.

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

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

LIMITATION OF LIABILITY

This document is only intended to be used as guidance as regards the risks of which we are aware that are associated with the product. Every individual who works with the product or in close proximity of it must receive suitable training. Individuals who come into contact with the product must be capable of using their own judgement as regards conditions or methods for handling, storing and using the product. Alfa Laval is not liable for demands, losses or damage of any kind that arise from flaws or deficiencies in this document or from using, handling, storing or disposing of the product unless it can be proven that Alfa Laval has acted in a grossly negligent manner. Beyond what has been agreed upon and specified in writing with Alfa Laval in the individual case, Alfa Laval makes no promises or assumes any liability, including but not limited to implicit guarantees regarding marketability or appropriateness in terms of both the information provided in this document and the product to which the information refers.

Please contact your local Alfa Laval Sales Company for further questions:

www.alfalaval.com

Department issuing SDS: Alfa Laval Corporate Standards & Regulatory Operations

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• **Date of preparation / last revision** 10/22/2019 / 2

• **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Met. Corr. 1: Corrosive to metals – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1A: Skin corrosion/irritation – Category 1A

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Skin Irrit. 2: Skin corrosion/irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
· * **Data compared to the previous version altered.**

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