



Safety Data Sheet

acc. to OSHA HCS

Printing date 04/10/2015


Version 3

Reviewed on 04/10/2015

1 Identification

- **Product identifier**
- **Trade name: Alfa Caus**
- **Application of the substance / the mixture** Industrial cleaner
- **Details of the supplier of the safety data sheet**
- **Supplier:**
Alfa Laval Tumba AB
Hans Stahles väg 7
S-147 80 Tumba
Sweden
+46 8 530 650 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**

GHS05
- **Signal word** Danger
- **Hazard-determining components of labeling:**
sodium hydroxide
- **Hazard statements**
May be corrosive to metals.
Causes severe skin burns and eye damage.
- **Precautionary statements**
Do not breathe mist/vapours/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.

(Contd. on page 2)

USA



Safety Data Sheet

acc. to OSHA HCS

Printing date 04/10/2015

Version 3

Reviewed on 04/10/2015

Trade name: Alfa Caus

(Contd. of page 1)

Wash contaminated clothing before reuse.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 3
Fire = 1
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 4
Fire = 1
Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

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

- **Dangerous components:**

1310-73-2	sodium hydroxide	5-15%
12068-03-0	Sodium toluene sulfonate	5-10%

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; consult doctor in case of complaints.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Flush eyes with lukewarm water for 10-15 minutes. Transport the exposed person to hospital or an eye specialist. Continue rinsing eyes during transport.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.

(Contd. on page 3)

USA



Safety Data Sheet acc. to OSHA HCS

Printing date 04/10/2015

Version 3

Reviewed on 04/10/2015

Trade name: Alfa Caus

(Contd. of page 2)

- **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.
- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
Carbon monoxide and carbon dioxide
Nitrogen oxides (NO_x)
Sulphur dioxide (SO₂)
- **Advice for firefighters**
- **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:**
Dilute with plenty of water.
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:**
Dilute with plenty water.
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.

USA

(Contd. on page 4)



Safety Data Sheet acc. to OSHA HCS

Printing date 04/10/2015

Version 3

Reviewed on 04/10/2015

Trade name: Alfa Caus

(Contd. of page 3)

7 Handling and storage

• Precautions for safe handling

When diluting, always stir the product into standing water, not water to product.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

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.

• **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:**

Keep receptacle tightly sealed.

Protect from frost.

• **Specific end use(s)**

Industrial cleaner

Only for trade users / technical specialists

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:**

1310-73-2 sodium hydroxide

PEL 2 mg/m³

REL Short-term value: C 2 mg/m³

TLV Short-term value: C 2 mg/m³

• **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.

(Contd. on page 5)

Safety Data Sheet acc. to OSHA HCS

Printing date 04/10/2015

Version 3

Reviewed on 04/10/2015

Trade name: Alfa Caus

(Contd. of page 4)

In case of insufficient ventilation, wear suitable respiratory equipment.

· **Breathing equipment:**



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.

Filter P2

· **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.

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form:

Fluid

Color:

Yellowish

· **Odor:**

undistinguishable

· **Odour threshold:**

Not determined.

· **pH-value at 20 °C (68 °F):**

13-14

(Contd. on page 6)



Safety Data Sheet

acc. to OSHA HCS

Printing date 04/10/2015

Version 3

Reviewed on 04/10/2015

Trade name: Alfa Caus

(Contd. of page 5)

· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	> 100 °C (> 212 °F)
· Flash point:	> 100 °C (> 212 °F)
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	
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 (9.764 lbs/gal)
· Relative density	Not determined.
· Vapour 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:	
Organic solvents:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Possibility of hazardous reactions**
Contact with acids releases flammable gases.
Reacts with base metals forming hydrogen.
- **Conditions to avoid** Do not store together with acids.
- **Incompatible materials:**
Keep away from acids.
Store away from metals.
- **Hazardous decomposition products:**
In case of fire, the following can be released:
Carbon monoxide and carbon dioxide

(Contd. on page 7)



Safety Data Sheet

acc. to OSHA HCS

Printing date 04/10/2015

Version 3

Reviewed on 04/10/2015

Trade name: Alfa Caus

(Contd. of page 6)

Nitrogen oxides (NOx)
Sulfur dioxide

11 Toxicological information

- Information on toxicological effects

- Acute toxicity:

1310-73-2 sodium hydroxide

Oral	LD50	2000 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:**

Strong caustic effect.

Irritating effect.

- Sensitization:** No sensitizing effects known.

- Additional toxicological information:

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

Causes severe burns.

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

1310-73-2 sodium hydroxide

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

12068-03-0 Sodium toluene sulfonate

EC50	245 mg/L (Algae) (OECD Guideline 201 (Alga, Growth Inhibition Test))
------	--

(Contd. on page 8)



Safety Data Sheet acc. to OSHA HCS

Printing date 04/10/2015

Version 3

Reviewed on 04/10/2015

Trade name: Alfa Caus

(Contd. of page 7)

>300 mg/L (daphnia)

- **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.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **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 μ S/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.

USA

(Contd. on page 9)



Safety Data Sheet

acc. to OSHA HCS

Printing date 04/10/2015

Version 3

Reviewed on 04/10/2015

Trade name: Alfa Caus

(Contd. of page 8)

14 Transport information

<ul style="list-style-type: none"> · UN-Number · DOT, ADR, IMDG, IATA 	UN1824
<ul style="list-style-type: none"> · UN proper shipping name · DOT, IMDG, IATA · ADR 	SODIUM HYDROXIDE SOLUTION 1824 SODIUM HYDROXIDE SOLUTION
<ul style="list-style-type: none"> · Transport hazard class(es) · DOT 	
<ul style="list-style-type: none"> · Class · Label 	8 Corrosive substances 8
<ul style="list-style-type: none"> · ADR, IMDG, IATA 	
<ul style="list-style-type: none"> · Class · Label 	8 Corrosive substances 8
<ul style="list-style-type: none"> · Packing group · DOT, ADR, IMDG, IATA 	II
<ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: 	No
<ul style="list-style-type: none"> · Special precautions for user · Danger code (Kemler): · EMS Number: · Segregation groups 	Warning: Corrosive substances 80 F-A,S-B Alkalis
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> · Transport/Additional information: 	<ul style="list-style-type: none"> · ADR · Excepted quantities (EQ)
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) 	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml 1L

(Contd. on page 10)

USA



Safety Data Sheet

acc. to OSHA HCS

Printing date 04/10/2015

Version 3

Reviewed on 04/10/2015

Trade name: Alfa Caus

(Contd. of page 9)

- | | |
|---|---|
| <ul style="list-style-type: none"> · Excepted quantities (EQ) | Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml |
| <ul style="list-style-type: none"> · UN "Model Regulation": | UN1824, Sodium hydroxide solution, 8, II |

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)

- **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):**

All ingredients are 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).

(Contd. on page 11)

USA

Safety Data Sheet acc. to OSHA HCS

Printing date 04/10/2015

Version 3

Reviewed on 04/10/2015

Trade name: Alfa Caus

(Contd. of page 10)

· **Hazard pictograms**



GHS05

· **Signal word** Danger

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

sodium hydroxide

· **Hazard statements**

May be corrosive to metals.

Causes severe skin burns and eye damage.

· **Precautionary statements**

Do not breathe mist/vapours/spray.

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

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a poison center/doctor.

Wash contaminated clothing before reuse.

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

16 Other information

www.alfalaval.com

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:

· **Department issuing SDS:** Alfa Laval Materials and Chemistry Centre (MACC)

· **Contact:**

Argentina: alfa.consulta@alfalaval.com

Australia: australia.info@alfalaval.com

Canada: alfacan.info@alfalaval.com

Austria: info.mideurope@alfalaval.com

Belgium: benelux.info@alfalaval.com

(Contd. on page 12)



Safety Data Sheet

acc. to OSHA HCS

Printing date 04/10/2015

Version 3

Reviewed on 04/10/2015

Trade name: Alfa Caus

Bolivia: alfa.consulta@alfalaval.com
Brazil: alfalaval.br@alfalaval.com
Bulgaria: bulgaria.info@alfalaval.com
Chile: chile.informacion@alfalaval.com
China: china.info@alfalaval.com
Colombia: info.colombia@alfalaval.com
Croatia: hrvatska.info@alfalaval.com
Czech Republic: czechrepublic.info@alfalaval.com
Denmark: info.nordic.dk@alfalaval.com
Egypt: alme.marketing@alfalaval.com
Estonia: estonia.info@alfalaval.com
Finland: info.fi@alfalaval.com
France: environnement@alfalaval.com
Germany: info.mideurope@alfalaval.com
Greece: greece.info@alfalaval.com
Hungary: info.hu@alfalaval.com
India: india.info@alfalaval.com
Indonesia: alfalindo@alfalaval.com
Israel: israel.info@alfalaval.com
Italy: alfalaval.italia@alfalaval.com
Latvia: latvia.info@alfalaval.com
Lithuania: lithuania.info@alfalaval.com
Malaysia: malaysia.info@alfalaval.com
Mexico: mexico.info@alfalaval.com
The Netherlands: benelux.info@alfalaval.com

(Contd. of page 11)

(Contd. on page 13)

USA



Safety Data Sheet acc. to OSHA HCS

Printing date 04/10/2015

Version 3

Reviewed on 04/10/2015

Trade name: Alfa Caus

(Contd. of page 12)

New Zealand: newzealand.info@alfalaval.com
Norway: info.no@alfalaval.com
Peru: ventas.peru@alfalaval.com
Philippines: philippines.info@alfalaval.com
Poland: poland.info@alfalaval.com
Portugal: portugal.info@alfalaval.com
Qatar: alme.marketing@alfalaval.com
Romania: romania.info@alfalaval.com
Russia: moscow.response@alfalaval.com
Singapore: al.singapore@alfalaval.com
Slovak Republic: slovakia.info@alfalaval.com
Slovenia: slovenija.info@alfalaval.com
South Africa: info.sa@alfalaval.com
Spain: info.spain@alfalaval.com
Sweden: info.se@alfalaval.com
Switzerland: info.mideurope@alfalaval.com
Taiwan: taiwan.info@alfalaval.com
Thailand: thailand.info@alfalaval.com
Turkey: turkey@alfalaval.com
Ukraine: ukraine.info@alfalaval.com
United Arab Emirates: alme.marketing@alfalaval.com
United Kingdom: general.uk@alfalaval.com
United States: customerservice.usa@alfalaval.com
Venezuela: venezuela.info@alfalaval.com
Vietnam: vietnam.info@alfalaval.com

• **Date of preparation / last revision** 04/10/2015 / 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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

Met. Corr.1: Corrosive to metals, Hazard Category 1

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

• *** Data compared to the previous version altered.**