

MATERIAL SAFETY DATA SHEET

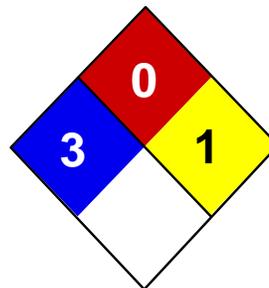
CAUSTIC SODA Flakes

Docdument Code: ATD1011V6
According to Regulation (EC) No. 1907/2006
UFI Code: DE0W-R0DX-J00V-SYM4

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name: CAUSTIC SODA Flakes
Substance Name: SODIUM HYDROXIDE
Chemical Formula: NaOH
REACH-number: 01-2119457892-27-0341
EC number: 215-185-5
CAS number: 1310-73-2
UN Number: 1823



Health	3
Fire	0
Reactivity	1
Personal Protection	J

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

Use of the Substance/Mixture :

Specific use(s):

Industrial and professional use : Consumer use , Used to produce soap, cellulose, dyu and many chemical compounds and as pH corrector factor.

1.3 Details of the supplier of the safety data sheet :

Company : Arotco GmbH
 Haingrabenstraße 85, 60488 ,
 Frankfurt am Main, Germany

Telephone : +49 (0) 69/2009-1649
Website : www.arotco.com
Email: info@arotco.com

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Corrosive to metals, 1, H290
Skin corrosion, 1A, H314
Serious eye damage, 1, H318

For the full text of the H-Statements mentioned in this Section, see Section 16.

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis.

Toxicological Data on Ingredients: Sodium hydroxide LD50: Not available. LC50: Not available.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Pictograms:



Signal word :

Danger

Hazard statements :

H290
H314

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

Precautionary statements :

Prevention:

P280

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

Response:

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.

P305 + P351 + P338 + P310

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.

P390

Absorb spillage to prevent material damage.

Disposal:

P501

Dispose of contents/container in accordance with local regulation.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

PBT (Inorganic) Not applicable

vPvB (Inorganic) Not applicable

According to the results of its assessment, this substance is not a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	Sodium hydroxide
Molecular formula	NaOH
Molar mass	40 g/mol
CAS No	1310-73-2
EC No	215-185-5

3.2 Mixture : Not applicable.

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off immediately all contaminated clothing. Self-protection of the first aider.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

After contact with skin, wash immediately with plenty of water. Immediate medical treatment required because Corrosive injuries that are not treated are hard to cure.

Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye.

Following ingestion

Rinse mouth immediately and drink plenty of water. Call a physician immediately. If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects). Following ingestion Rinse mouth immediately and drink plenty of water. Call a physician immediately. If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

- Inhalation : No known significant effects or critical hazards.
- Skin contact : Causes severe burns.
- Ingestion : May be irritating to mouth, throat and stomach. Corrosive to the digestive tract.

Over-exposure signs/symptoms:

- Eye contact : Adverse symptoms may include the following:
 pain
 watering
 redness
- Inhalation : No specific data.
- Skin contact : Adverse symptoms may include the following:
 pain or irritation
 redness
 blistering may occur
- Ingestion : Adverse symptoms may include the following:
 stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments : No specific treatment.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

- Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture : No specific fire or explosion hazard.
- Hazardous combustion products : Decomposition products may include the following materials:
 metal oxide/oxide

5.3 Advice for firefighters

- Special precautions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN469 will provide a basic level of protection for chemical incidents.
- Additional information : Not considered to be a product presenting a risk of explosion.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions , protective equipment and emergency procedures

- Personal precautions : Use personal protective equipment .
Wear respiratory protection.
Ensure adequate ventilation.
- Emergency measures on
Accidental release : Evacuate personnel to safe areas.
Only qualified personnel equipped with suitable protective
equipment may intervene.
Prevent unauthorized persons entering the zone.

6.2 Environmental precautions

- Environmental precautions : Try to prevent the material from entering drains or water courses.

6.3 Methods and materials for containment and cleaning up

- Methods for cleaning up /
Methods for containment : Soak up with inert absorbent material (e.g. sand , silica gel,
acid binder, universal binder , sawdust).
Keep in suitable , closed containers for disposal.

6.4 Reference to other sections

- For disposal considerations see section 13.
For personal protection see section 8.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

- Advice on safe handling : For personal protection see section 8.
Avoid formation of aerosol.
Do not breathe vapours or spray mist.
Smoking , eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.
- Advice on protection against
fire and explosion : Normal measures for preventive fire protection.

7.2 Conditions for safe storage , including any incompatibilities

- Requirements for storage
areas and containers : Keep container tightly closed in a dry and well-ventilated
place.
Store in closed dark containers made of anti-corrosive
material.
- Other data : Suitable container and packaging materials for safe storage
Steel (all types and surface treatments)
Polypropylene
Polyethylene
PVC
- : Suitable container and packaging materials for safe storage
>50°C:

Stainless steel
Nickel

: No decomposition if stored and applied as directed.

7.3 Specific end use(s)

No information available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Product/ingredient name	Type	Exposure	Value	Population	Effects
SODIUM HYDROXIDE	DNEL	Long term Inhalation	1 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	1 mg/m ³	General population [Human via the environment]	Local
Further information	At an exposure above the limit value, irritation occurs or a danger exists for acute intoxication. The working method should therefore be designed in away that the exposure never exceeds this limit value. At a control, the sampling period must be as short as possible to be able to perform a reliable measurement The results of the measurement will be related to the period of time in which the sampling took place				

ACGIH : American Conference of Governmental Industrial Hygienists
AGW : Arbeitsplatzgrenzwert
BEI : Biological Exposure Index
MAC : Maximum Allowable Concentration
NIOSH : National Institute for Occupational Safety and Health OEL: OEL: Occupational exposure limit.
STEL : Short term exposure limit
TRGS : Technische Regel für Gefahrstoffe TWA: Time Weighted Average

8.2 Exposure controls

Individual protection measures (personal protective equipment) Eye/face protection



Use safety goggles with side protection. Wear face protection.

Skin protection



• hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

• type of material

NBR (Nitrile rubber)

• material thickness

>0,3 mm

• breakthrough times of the glove material

>480 minutes (permeation: level 6)

• other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection



Respiratory protection necessary at : Dust formation. Particulate filter device (EN 143). P1 (filters at least 80 % of airborne particles, colour code: White).

Environmental exposure controls

Keep away from drains, surface and ground water.

10.6 Hazardous decomposition products

No dangerous substances are released.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Routes of Entry : Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.
Toxicity to Animals :
Oral, rat : LD50 = 340 mg/kg.
Dermal, Rabbit : LC50 = 1350 mg/kg.

Chronic Effects on Humans:

Causes damage to the following organs: lungs.

Other Toxic Effects on Human :

Extremely hazardous in case of inhalation (lung corrosive). Very hazardous in case of skin contact (corrosive, irritant, permeator), of eye contact (corrosive), of ingestion. This product does not contain any known or suspected endocrine disruptors.

Special Remarks on Toxicity to Animals:

Lowest Published Lethal Dose: LDL [Rabbit] - Route: Oral; Dose: 500 mg/kg

Special Remarks on Chronic Effects on Humans:

May affect genetic material (mutagenic). Investigation as a mutagen (cytogenetic analysis), but no data is available.

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: May be harmful if absorbed through skin. Causes severe skin irritation and burns. May cause deep penetrating ulcers of the skin. Eyes: Causes severe eye irritation and burns. May cause chemical conjunctivitis and corneal damage. Inhalation: Harmful if inhaled. Causes severe irritation of the respiratory tract and mucous membranes with coughing, burns, breathing difficulty, and possible coma. Irritation may lead the chemical pneumonitis and pulmonary edema. Causes chemical burns to the respiratory tract and mucous membranes. Ingestion: May be fatal if swallowed. May cause severe and permanent damage to the digestive tract. Causes severe gastrointestinal tract irritation and burns. May cause perforation of the digestive tract. Causes severe pain, nausea, vomiting, diarrhea, and shock. May cause corrosion and permanent destruction of the esophagus and digestive tract.

11.2 Endocrine disrupting properties

Not listed.

11.3 Information on other hazards

There is no additional information.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment

Aquatic toxicity (acute)				
Endpoint	Value	Species	Source	Exposuretime
LC50	<180mg/l	fish	ECHA	96 h
EC50	40,4mg/l	aquatic invertebrates	ECHA	48 h

Aquatic toxicity (chronic)				
Endpoint	Value	Species	Source	Exposuretime
EC50	22mg/l	microorganisms	ECHA	15 min

Biodegradation

The methods for determining the biological degradability are not applicable to inorganic substances.

12.2 Process of degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

Not listed.

12.7 Other adverse effects

Data are not available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. Waste catalogue ordinance (Germany).

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number

ADR/RID : UN1823
IMDG : UN1823
IATA : UN1823

14.2 UN proper shipping name

ADR/RID : SODIUM HYDROXIDE SOLID
IMDG : SODIUM HYDROXIDE, SOLID
IATA : Sodium hydroxide, solid

14.3 Transport hazard class(es)

ADR/RID : 8



IMDG : 8



IATA : 8



14.4 Packing group

ADR/RID : II
IMDG : II
IATA : II

14.5 Environmental hazards

ADR/RID : No.
IMDG : No.
IATA : No.

Additional information

ADR/RID : Hazard identification number 80
Limited quantity 1 kg
Tunnel code (E)

AND : The product is only regulated as an environmentally hazardous substance when transported in tank environmentally hazardous substance when transported in tank vessels.

IMDG : Emergency schedules F-A, S-B

IATA : Quantity limitation Passenger and Cargo Aircraft: 15 kg. Packaging instructions: 859. Cargo Aircraft Only: 50 kg. Packaging instructions: 863. Limited Quantities - Passenger Aircraft: 5 kg. Packaging instructions: Y844.

14.6 Special precautions for user

Transport within user's premises : always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments

Not applicable.

SECTION 15: REGULATORY INFORMATION

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

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), establishing a European Chemicals Agency

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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

The European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)
Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) constituting Appendix C to the Convention concerning International Carriage by Rail (COTIF)
International Maritime Dangerous Goods Code (IMDG CODE)
IATA /International Air Transport Association/ Dangerous Goods Regulations (IATA DGR)
Ordinance of the Minister of Labour and Social Policy of 12 June 2018 concerning maximum permissible concentrations and intensities of agents harmful to health in a work environment (Journal of Laws 2018 item 1286). Act on Waste of 14 December 2012 (Dz. U. /Journal of Laws/ of 2013, No. 0, item 21)

Act on Packaging and Packaging Waste Management of 13 June 2013 (Dz. U. /Journal of Laws/ of 2013, No. 0, item 888)
Act on Chemical Substances and Their Mixtures of 25 February 2011 (Dz. U. /Journal of Laws/ No. 63, item 322)
Regulation of the Minister of Labour and Social Policy on the general occupational health and safety regulations of 26 September 1997 (Dz. U. /Journal of Laws/ of 2003, No. 169, item 1650 as amended)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

Europe inventory : All components are listed or exempted.

Seveso Directive

This product is not controlled under the Seveso Directive.

International regulations

15.2 Chemical Safety Assessment

Complete

