SAFETY DATA SHEET
Sodium Hydroxide Anhydrous
According to 1907/2006/EC, Article 31

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

1.1. Product identifier

Product name	Sodium Hydroxide Anhydrous
REACH registration number	01-2119457892-27-0055
CAS number	1310-73-2
EU index number	011-002-00-6
EC number	215-185-5

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

Identified uses	Production of solid sodium hydroxide including the production of aqueous sodium hydroxide solution. Industrial and professional use of sodium hydroxide: In the pulp and paper industry, production of crop protection, organic pigments, epoxy resins, textile industry, rubber industry, food industry, metal industry, aluminum industry. As a reactant for the manufacturing of chemicals or for neutralization (steel industry, electroplating industry, (waste water), rubber industry, cleaning and water treatment (food industry) or extraction (aluminum industry) Consumers: Use of sodium hydroxide: Neutralisation, cleaning products, cosmetics, personal care products, batteries.
Sector of Use	SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites SU8 Manufacture of bulk, large scale chemicals (including petroleum products)
Process category	PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities. PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions. PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises
Application of the substance / the mixture	Chemicals for synthesis Chemical production,

1.3. Details of the supplier of the safety data sheet

Sodium Hydroxide Anhydrous

Manufacturer	ARABIAN ALKALI COMPANY (SODA) P.O.Box-121010, Jubail Industrial City - 31961 Kingdom of Saudi Arabia Tel +966 13 3583400 Fax + 966 13 3585536 safety@nama.com.sa
Only Representative REACH 1907/2006/EC Article 8	NAMA Germany Teichstrasse 38 D-79539 Lörrach Tel. + 49 762 1940 5410 Fax. + 49 762 1940 5420

1.4. Emergency telephone number

Emergency telephone	SODA Tel. +966 509058826 Tel. +966 501580466

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Met. Corr. 1 - H290
Health hazards	Skin Corr. 1A - H314
Environmental hazards	Not Classified

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008	The substance is classified and labelled according to the CLP regulation.
EC number	215-185-5

Pictogram

Signal word	Danger
Hazard-determining components of labelling	Sodium hydroxide
Hazard statements	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage.
Precautionary statements	P260 Do not breathe dust. 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. P405 Store locked up. P501 Dispose of contents/ container in accordance with national regulations.

2.3. Other hazards

Sodium Hydroxide Anhydrous

Results of PBT and vPvB assessment: Not applicable.

SECTION 3: Composition/information on ingredients

3.1. Substances

Product name Sodium Hydroxide Anhydrous

REACH registration number 01-2119457892-27-0055

EU index number 011-002-00-6

CAS number 1310-73-2

EC number 215-185-5

SECTION 4: First aid measures

4.1. Description of first aid measures

General information Promptly remove any clothing that becomes wet or contaminated.

Inhalation IF INHALED: Place unconscious person on their side in the recovery position and ensure breathing can take place. Get medical attention immediately.

Ingestion IF SWALLOWED: Remove person to fresh air and keep comfortable for breathing. Give plenty of water to drink. Get medical attention immediately.

Skin contact IF ON SKIN: Wash promptly with soap and water if skin becomes contaminated.

Eye contact IF IN EYES: Get medical attention immediately. Remove any contact lenses and open eyelids wide apart. Rinse cautiously with water for several minutes.

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

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

Notes for the doctor No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Use fire-extinguishing media suitable for the surrounding fire. The product is not combustible but in a fire may release oxygen, which can increase the burning rate of flammable materials. In case of fire and/or explosion do not breathe fumes.

5.2. Special hazards arising from the substance or mixture

Specific hazards No information available.

5.3. Advice for firefighters

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid handling which leads to dust formation. Use protective equipment appropriate for surrounding materials. Avoid contact with skin, eyes and clothing. In case of insufficient ventilation, wear suitable respiratory equipment.

For non-emergency personnel Keep unnecessary and unprotected personnel away from the spillage.

6.2. Environmental precautions

Sodium Hydroxide Anhydrous

Environmental precautions Avoid the spillage or runoff entering drains, sewers or watercourses.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Clean contaminated objects and areas thoroughly, observing environmental regulations. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Provide adequate ventilation.

6.4. Reference to other sections

Reference to other sections Follow precautions for safe handling described in this safety data sheet. For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Thorough dedusting.

Information about fire - and explosion protection No special treatment required.

7.2. Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles Unsuitable container materials: Aluminium.

Storage precautions Keep contents moist. Avoid contact with acids and alkalis. Keep container tightly closed and dry.

Storage class 8 B (TRGS 510) Non flammable, corrosive substances.

7.3. Specific end use(s)

Specific end use(s) No information available.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

MAK (Germany)/MAK (EU) vgl. Abschn.IV

DNEL Workers - Inhalation; Long term : 1 mg/m³

Additional information: MAK (EU): Long-term value: 200 mg/m3, 300 ppm
MAK (Switzerland): Short-term value: 2 e mg/m3; Long-term value: 2 e mg/m3; SSc The lists valid during the making were used as basis.

8.2. Exposure controls

Protective equipment

Personal protection Keep away from food, drink and animal feeding stuffs. Promptly remove any clothing that becomes contaminated. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Avoid contact with skin and eyes.

Eye/face protection Wear tight-fitting, dust-resistant, chemical splash goggles if airborne dust is generated.

Sodium Hydroxide Anhydrous

Hand protection	Wear protective gloves. It is recommended that chemical-resistant, impervious gloves are worn. It is recommended that gloves are made of the following material: Nitrile rubber. Chloroprene rubber. Butyl rubber. Thickness: ≥ 0.5 mm Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. The selected gloves should have a breakthrough time of at least 8 hours. To protect hands from chemicals, gloves should comply with European Standard EN374.
Respiratory protection	Respiratory protection may be required if excessive airborne contamination occurs. Vapours/aerosol spray may irritate the respiratory system.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Solid.
Colour	White.
Odour	Odourless.
pH	Not applicable.
Melting point	319°C
Initial boiling point and range	1,390°C (DIN 51751)
Flash point	Not applicable.
Flammability (solid, gas)	The product is not flammable.
Vapour pressure	3.5 hPa @ 800°C
Density	2.13 g/cm3
Solubility(ies)	Soluble in water. 420 g/l @ 20°C
Partition coefficient	Not determined.
Viscosity	Not applicable.
Explosive properties	Not considered to be explosive.
Organic solvents	0.0%
VOC (EC)	0.00%
Solid content	100.0%

9.2. Other information

Other information	No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	No information available.

10.2. Chemical stability

Thermal decomposition / conditions to be avoided	Does not decompose when used and stored as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	No potentially hazardous reactions known.

Sodium Hydroxide Anhydrous

10.4. Conditions to avoid

Conditions to avoid Product is hygroscopic. Avoid contact with moisture.

10.5. Incompatible materials

Materials to avoid Metal or metallic solid. In contact with some metals can generate hydrogen gas, which can form explosive mixtures with air. Acids. Organic cyanides (nitriles). Alkaline earth metals. Powdered metal. 2. Ammonium compounds Cyanides. Magnesium. Organic nitro compounds. Take any precaution to avoid mixing with combustibles, alkalis and organic materials. Phenols, cresols.

10.6. Hazardous decomposition products

Hazardous decomposition products None.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects Based on available data the classification criteria are not met.

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg) 2,000.0

Species Rat

Skin corrosion/irritation

Skin corrosion/irritation Causes severe skin burns and eye damage.

Serious eye damage/irritation

Serious eye damage/irritation Causes severe skin burns and eye damage. Causes serious eye damage.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

SECTION 12: Ecological Information

Sodium Hydroxide Anhydrous

General Notes Control run-off water by containing and keeping it out of sewers and watercourses. Avoid discharge into drains and the aquatic environment. The product contains a substance which is hazardous to aquatic organisms and which may cause long term adverse effects in the aquatic environment. Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

12.1. Toxicity

Acute toxicity - fish EC_{50}, 24 hours: 76 mg/l, Daphnia magna
LC_{50}, 48 hours: 99 mg/l, Lepomis macrochirus (Bluegill)
, : 45.4 mg/l, Onchorhynchus mykiss (Rainbow trout)

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulative potential No information available.

Partition coefficient Not determined.

12.4. Mobility in soil

Mobility No information available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment Not applicable.

12.6. Other adverse effects

Other adverse effects No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods Dispose of waste via a licensed waste disposal contractor. Dispose of this material and its container to hazardous or special waste collection point. Avoid the spillage or runoff entering drains, sewers or watercourses.

European waste catalogue: 06 02 04* : sodium and potassium hydroxide

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) UN 1823

UN No. (IMDG) UN 1823

UN No. (ICAO) UN 1823

14.2. UN proper shipping name

Proper shipping name (ADR/RID) UN1823 SODIUM HYDROXIDE, SOLID

Proper shipping name (IMDG) SODIUM HYDROXIDE, SOLID

Proper shipping name (ICAO) SODIUM HYDROXIDE, SOLID

14.3. Transport hazard class(es)

ADR/RID class 8

Sodium Hydroxide Anhydrous

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

Transport labels

14.4. Packing group

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

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Warning Corrosive

Danger code(Kemler):	80
EmS	F-A, S-B
Stowage Category	A
ADR transport category	2
Emergency Action Code	2W
Hazard Identification Number (ADR/RID)	80
Tunnel restriction code	(E)
Segregation Code:	SG35 Stow "separated from" acids.

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

ADR and IMDG:

Excepted quantities (EQ):	Code: E2
Limited quantities (LQ)	1 Kg
Maximum net quantity per inner packaging:	30 g
Maximum net quantity per outer packaging:	500 g
Transport Category:	2

Sodium Hydroxide Anhydrous

Tunnel Restriction Code: E

ADR and IMDG Remarks: Lösungen: 8.42b, KZ 80, UN 1824, Gz 8

UN "Model Regulation": UN 1823 SODIUM HYDROXIDE, SOLID, 8, II

SECTION 15: Regulatory information

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

EU legislation 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).
The substance is classified and labelled according to the CLP regulation.

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
ICAO: International Civil Aviation Organisation
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
IMDG: International Maritime Dangerous Goods.
IATA: International Air Transport Association.
GHS: Globally Harmonized System.
EINECS: European Inventory of Existing Commercial and Chemical Substances
CAS: Chemical Abstracts Service.
VOC: Volatile Organic Compounds (USA,EU)
DNEL: Derived No Effect Level.
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic substance.
vPvB: Very Persistent and Very Bioaccumulative.
Met. Corr.1: Corrosive to metals, Hazard Category 1
Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
WGK: German Water Hazard Class.

Revision date 10/06/2018

Revision 00

SDS number 4642

Hazard statements in full
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

Disclaimer 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.