SAFETY DATA SHEET
Sodium Hydroxide Solution 50%

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

1.1. Product identifier

Product name
Sodium Hydroxide Solution 50%

Chemical name
(NaOH) codium Hydroxide solution (10 - 60%)

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 soda hydroxides including the production of aqueous sodium hydroxide solution
Industrial and professional use of sodium hydroxide. In the pulp and paper industry, production of pesticides, organic pigments, epoxy resins, textile industry, rubber industry, food industry, metal industry, aluminum industry. As a reactant for the Herstelluing of Chemkalien, or to neutralize (steel industry, electroplating industry, (waste water), rubber industry, cleaning and water treatment (food industry) or extraction (aluminum industry)
Consumers: Use of sodium hydroxide:

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

Environmental release category
No relevant release

Application of the substance / the mixture
Chemical production, Chemicals for synthesis

1.3. Details of the supplier of the safety data sheet
Sodium Hydroxide Solution 50%

Manufacturer: Jubail Chemical Industries Company (JANA)
Tareeq 263, Jubail 1, Jubail Industrial City, 31961
Kingdom of Saudi Arabia, (PO Box 10661)
Tel. +966 13 3585002
Fax. +966 13 3583192
safety@nama.com.sa

1.4. Emergency telephone number

Emergency telephone: Emergency CONTACT (24-Hour-Number): GBK GmbH +49 (0)6132-84463

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Health hazards: Skin Corr. 1A - H314 Eye Dam. 1 - H318
Environmental hazards: Not Classified

2.2. Label elements

EC number: 215-185-5

Hazard pictograms

Signal word: Danger

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

Precautionary statements: P260 Do not breathe vapour/spray.
P264 Wash contaminated skin thoroughly after handling.
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 or 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.
P501 Dispose of contents/container in accordance with national regulations.

Contains: Sodium Hydroxide

2.3. Other hazards

Results of PBT and vPvB assessment: Not applicable.

SECTION 3: Composition/information on ingredients

3.2. Mixtures
Sodium Hydroxide Solution 50%

<table>
<thead>
<tr>
<th>Sodium Hydroxide</th>
<th>30-60%</th>
</tr>
</thead>
<tbody>
<tr>
<td>REACH registration number: 01-2119457892-27-0055</td>
<td></td>
</tr>
</tbody>
</table>

Classification
Skin Corr. 1A - H314

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information
Remove contaminated clothing and wash the skin thoroughly with soap and water after work.

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

Ingestion
IF SWALLOWED: Promptly get affected person to drink large volumes of water to dilute the swallowed chemical. Move affected person to fresh air at once. Get medical attention immediately.

Skin contact
IF ON SKIN: Wash skin thoroughly with soap and water or use an approved skin cleanser.

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

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

General information
No information available.

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. Not-combustable. Ambient fire may liberate hazardous vapours.

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 generation and spreading of dust. Wear protective clothing, gloves, eye and face protection. Keep unnecessary and unprotected personnel away from the spillage.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up
Sodium Hydroxide Solution 50%

Methods for cleaning up
Avoid contact with oxidising agents. For waste disposal, see Section 13. Provide adequate ventilation.

6.4. Reference to other sections
Reference to other sections
For personal protection, see Section 8. Collect and dispose of spillage as indicated in Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Usage precautions
Absorb spillage to prevent material damage.

7.2. Conditions for safe storage, including any incompatibilities
Storage precautions
Unsuitable container materials: Aluminium. Do not mix with acid. Store at temperatures above 5 to +30°C. Keep container tightly closed and dry.

7.3. Specific end use(s)
Specific end use(s)
No information available.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Sodium Hydroxide (CAS: 1310-73-2)

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. Remove contaminated clothing and wash the skin thoroughly with soap and water after work. Avoid inhalation of vapours/spray and contact with skin and eyes. Use appropriate skin cream to prevent drying of skin.

Eye/face protection
Wear tight-fitting, chemical splash goggles or face shield.

Hand protection
Wear protective gloves. Thickness: ≥ 0.5 mm For users with sensitive skin, it is recommended that suitable protective gloves are worn. It is recommended that gloves are made of the following material: Rubber (natural, latex). Chloroprene rubber. Nitrile rubber. Viton rubber (fluoro rubber). Butyl rubber. Polyvinyl chloride (PVC). 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.

Other skin and body protection
Wear protective clothing.

Hygiene measures
Keep away from food, drink and animal feeding stuffs. Wash hands thoroughly after handling. Avoid contact with skin, eyes and clothing. Use appropriate skin cream to prevent drying of skin.
**Sodium Hydroxide Solution 50%**

**Respiratory protection**  
In case of possible exposure to degradation products, use suitable respiratory protection.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>Clear liquid.</td>
</tr>
<tr>
<td><strong>Colour</strong></td>
<td>Colourless.</td>
</tr>
<tr>
<td><strong>Odour</strong></td>
<td>Odourless.</td>
</tr>
<tr>
<td><strong>Odour threshold</strong></td>
<td>No other information known.</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>14 (10% 30% 50% solutions)</td>
</tr>
<tr>
<td><strong>Melting point</strong></td>
<td>12°C/53.6°F</td>
</tr>
<tr>
<td><strong>Initial boiling point and range</strong></td>
<td>140°C/284°F</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>The product is not flammable.</td>
</tr>
<tr>
<td><strong>Upper/lower flammability or explosive limits</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Vapour pressure</strong></td>
<td>13 mm Hg @ 60°C/140°F</td>
</tr>
<tr>
<td><strong>Density</strong></td>
<td>1.53 g/cm³ (50% solution)</td>
</tr>
<tr>
<td><strong>Solubility(ies)</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Solid content</strong></td>
<td>10 - 60%</td>
</tr>
</tbody>
</table>

#### 9.2. Other information

**Other information**  
No other information known.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

#### 10.2. Chemical stability

#### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions**  
No potentially hazardous reactions known.

#### 10.4. Conditions to avoid

**Conditions to avoid**  
No information available.

#### 10.5. Incompatible materials

**Materials to avoid**  
In contact with some metals can generate hydrogen gas, which can form explosive mixtures with air. Avoid contact with the following materials: Acids. Organic cyanides (nitriles). Alkaline earth metals. Cyanides. Magnesium. Organic nitro compounds. phenols and halogenated phenols 2. Ammonium compounds

#### 10.6. Hazardous decomposition products

**Hazardous decomposition products**  
No known hazardous decomposition products.

### SECTION 11: Toxicological information
Sodium Hydroxide Solution 50%

11.1. Information on toxicological effects

Other health effects
This product is corrosive. Swallowing concentrated chemical may cause severe internal injury. May cause burns in mucous membranes, throat, oesophagus and stomach.

Acute toxicity - oral
Notes (oral LD₅₀)
LD₅₀ 2000 mg/kg, Oral, Rat

Skin corrosion/irritation
Severe skin irritation. The product irritates mucous membranes and may cause abdominal discomfort if swallowed.

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

Respiratory sensitisation
Not sensitising.

Skin sensitisation
Not sensitising.

Carcinogenicity
IARC carcinogenicity Not listed.
NTP carcinogenicity Not listed.

SECTION 12: Ecological information

General Notes
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water. Avoid discharge into drains and the aquatic environment. Do not discharge into drains or watercourses or onto the ground.

12.1. Toxicity
Acute aquatic toxicity
Acute toxicity - fish
LC₅₀, 48 hours: 99 mg/l, Lepomis macrochirus (Bluegill) 45.4 mg/l (Oncorhynchus mykiss)

Acute toxicity - aquatic invertebrates
EC₅₀, 24 hours: 76 mg/l, Daphnia magna

12.2. Persistence and degradability
Persistence and degradability No information available.

12.3. Bioaccumulative potential
Bioaccumulative potential No information available.

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

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Sodium Hydroxide Solution 50%

General information
External recovery, treatment, recycling and disposal of waste should comply with all applicable local and/or national regulations.

Disposal methods
Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Do not release into the environment.

SECTION 14: Transport information

14.1. UN number
UN No. (ADR/RID) 1824
UN No. (IMDG) 1824
UN No. (ICAO) 1824

14.2. UN proper shipping name
Proper shipping name (ADR/RID) SODIUM HYDROXIDE SOLUTION
Proper shipping name (IMDG) SODIUM HYDROXIDE SOLUTION
Proper shipping name (ICAO) SODIUM HYDROXIDE SOLUTION

14.3. Transport hazard class(es)
ADR/RID class 8
ADR/RID classification code C5
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
IMDG Code segregation group 18. Alkalis
EmS F-A, S-B
ADR transport category 2
Emergency Action Code 2R
Sodium Hydroxide Solution 50%

Hazard Identification Number (ADR/RID) 80

Tunnel restriction code (E)

Transportation Additional Information: ADR/IMDG

Excepted Quantities (EQ): Code: E2

Limited Quantities (LQ): 1 kg (as 100%)

Maximum Net Quantity per Inner Packaging: 30 g (as 100%)

Maximum Net Quantity per Outer Packaging: 500 g (as 100%)

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.

SECTION 15: Regulatory information

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

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.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
IMDG: International Maritime 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 and Chemical Substances
CAS: Chemical Abstracts Service.
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC₅₀: Lethal Concentration to 50 % of a test population.
LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
Met. Corr. 1: Corrosive to metals, Hazard Category 1
Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Revision comments

SECTION 12: Ecological Information SECTION 15: Regulatory Information SECTION 16: Other Information

Revision date 13/09/2020
Revision 02
Supersedes date 01/11/2018
SDS number 4771
**Sodium Hydroxide Solution 50%**

<table>
<thead>
<tr>
<th>Hazard statements in full</th>
<th>H290 May be corrosive to metals.</th>
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<tbody>
<tr>
<td></td>
<td>H314 Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td></td>
<td>H318 Causes serious eye damage.</td>
</tr>
</tbody>
</table>

**Disclaimer**

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