

MATERIAL SAFETY DATA SHEET

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name: Sodium hydroxide
Product code: S044, S045, S046, S235, S304, SS15
Brand: LEONID
CAS-No.: 1310-73-2

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

Identified uses: Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company: Leonid Chemicals Pvt. Ltd
Plot No. 30P2, KIADB Industrial Area
Dobaspet – 562111
Taluk – Nelamangala
District – Bangalore Rural
State – Karnataka
India

1.4 Emergency telephone number

Emergency phone number: +91 23377126 / 23378254

2. Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Corrosive to metals (Category 1), H290

Skin corrosion (Category 1A), H314

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

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Danger

Hazard statement(s)

H290

May be corrosive to metals

H314

Causes severe skin burns and eye damage.

Precautionary statement(s)

P260

Do not breathe dust/ fume/ gas/ 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.

P304 + P340 + P310

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Statements None

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. Composition/information on ingredients

3.1 Substances

Synonyms: Caustic soda
Formula: HNaO
Molecular weight: 40.00 g/mol
CAS-No.: 1310-73-2
EC-No.: 215-185-5
Index-No.: 011-002-00-6
Registration number: 01-2119457892-27-XXXX

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Sodium hydroxide		
CAS-No.: 1310-73-2 EC-No.: 215-185-5 Index-No.: 011-002-00-6 Registration No.: 01-2119457892-27-XXXX	Met. Corr. 1; Skin Corr. 1A; H290, H314 Concentration limits: ≥ 5 %: Skin Corr. 1A, H314; 2 - < 5 %: Skin Corr. 1B, H314; 0.5 - < 2 %: Skin Irrit. 2, H315; 0.	≤ 100 %

Hazardous ingredients according to Directive 1999/45/EC

Component	Classification	Concentration
Sodium hydroxide		
CAS-No.: 1310-73-2 EC-No.: 215-185-5 Index-No.: 011-002-00-6 Registration No.: 01-2119457892-27-XXXX	C, R35	≤ 100 %

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

4. First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Sodium oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other section

For disposal see section 13.

7. Handling and storage

7.1 Precautions for safe handling

Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Hygroscopic.

Storage class (TRGS 510): Non-Combustible, corrosive hazardous materials

7.3 Specific end uses

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL)

Application Area	Exposure routes	Health effect	value
Workers	Inhalation	Long-term local effects	1mg/m3
Consumers	Inhalation	Long-term local effects	1mg/m3

8.2 Exposure control

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection

Faceshield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 48 min

Material tested: Dermatrill

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 48 min

Material tested: Dermatrill

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

- | | |
|--------------------|------------------------|
| a) Appearance | White pellets / flakes |
| b) Odour | Odourless |
| c) Odour Threshold | No data available |

d) pH	14 at 50 g/l 20°C
e) Melting point/freezing point	Melting point/range: 318.0°C - lit.
f) Initial boiling point and boiling range	1.390°C - lit
g) Flash point	Not applicable
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	< 24,00 hPa at 20°C 4,00 hPa at 37 °C
l) Vapour density	1.36 - (Air = 1.0)
m) Relative density	2.1300 g/cm ³ at 25°C
n) Water solubility	ca.1.260 g/l at 20°C
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available
9.2 Other safety information	
Bulk density ca.	1.150 kg/m ³
Relative vapour density	1,38 - (Air = 1.0)

10. Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong oxidizing agents, Strong acids, Organic materials

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions – Sodium oxides

Other decomposition products - No data available

In the event of fire: see section 5

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

No data available (Sodium hydroxide)

Skin corrosion/irritation

Skin - Rabbit (Sodium hydroxide)

Result: Causes severe burns. - 24 h

Serious eye damage/eye irritation

Skin – Rabbit (Sodium hydroxide)

Result: Corrosive - 24 h

Respiratory or skin sensitisation

Will not occur (Sodium hydroxide)

Germ cell mutagenicity

No data available (Sodium hydroxide)

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available (Sodium hydroxide)

Specific target organ toxicity - single exposure

No data available (Sodium hydroxide)

Specific target organ toxicity - repeated exposure

No data available (Sodium hydroxide)

Aspiration hazard

No data available (Sodium hydroxide)

Additional Information

RTECS: WB4900000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. (Sodium hydroxide)

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. Ecological information

12.1 Toxicity

Toxicity to fish	LC50 - Gambusia affinis (Mosquito fish) - 125 mg/l - 96 h (Sodium hydroxide) LC50 - Oncorhynchus mykiss (rainbow trout) – 54.4 mg/l 96 h (Sodium hydroxide)
Toxicity to daphnia and other aquatic invertebrates	Immobilization EC50 - Daphnia magna (Water flea) – 40.38 mg/l - 48 h (Sodium hydroxide)

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Harmful to aquatic life

13. Disposal considerations

**13.1 Waste treatment methods
Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. Transport information

14.1 UN number

ADR/RID: - 1823

IMDG: - 1823

IATA: - 1823

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 Packaging group

ADR/RID: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID: no

IMDG: no

IATA: no

14.6 Special precautions for user

No data available

15. Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

16. Other information

Full text of H-Statements referred to under sections 2 and 3.

H290

May be corrosive to metals.

H314

Causes severe skin burns and eye damage.

Met. Corr.

Corrosive to metals

Skin Corr.

Skin corrosion

Full text of R-phrases referred to under sections 2 and 3

C

Corrosive

R35

Causes severe burns.

Further information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Leonid Chemicals Pvt. Ltd. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Leonid Chemicals Pvt. Ltd. has been advised of the possibility of such damages.



Leonid Chemicals Private Limited

Reg. Off: 62/2A, 1st Stage, Yeshwanthpur Ind Suburb
Ashokpuram, Bengaluru – 560022, Karnataka, India.

Ph.: +91-80-23377126, 23378354

Email: leonid@leonidchemicals.net

Website: www.leonidchemicals.net

CIN: U24122KA1999PTC024646 : GST No.29AAACL4386K1Z1