

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

**1.1 Product identifier**

Product name	SODIUM HYDROXIDE
CAS-No.	1310-73-2
Product code	BP1402

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

Identified uses	Chemical for analysis and production.
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**1.3 Details of the supplier of the safety data sheet**

Company	RCI LABSCAN LIMITED. 24 Rama 1 Road, Pathumwan, Bangkok 10330 Thailand
Telephone number	(662) 613-7911-4
Fax number	(662) 613-7915

**1.4 Emergency Telephone Number**

Emergency phone	(662) 613-7911-4
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**SECTION 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)

P234

Keep only in original packaging.

P260

Do not breathe dusts or mists.

P264

Wash hand thoroughly after handling.

P280

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

P301 + P330 + P331

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302 + P361 + P354

IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Immediately rinse with water for several minutes.

P304 + P340

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305 + P354 + P338

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

P316

Get emergency medical help immediately.

P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P405	Store locked up.
P406	Store in corrosive resistant/ container with a resistant inner liner.

**2.3 Other hazards** None

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Synonyms Caustic soda, Sodium hydrate, Sodium lye, White Caustic.

CAS-No	EC-No	EC-Index-No	Formula	Molecular Weight	Weight %
1310-73-2	215-185-5	011-002-00-6	NaOH	40.00 g/mol	>97

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

Component	Concentration	Classification
<b>Sodium hydroxide</b>		
CAS-No 1310-73-2	>97%	Corrosive to metals (Category 1), H290 Skin corrosion (Category 1A), H314
EC-No 215-185-5		
EC-Index-No 011-002-00-6		

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

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Move to fresh air in case of accidental inhalation of dust. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus.
Skin contact	Remove contaminated clothing and wash affected skin with soap and water. Dab with polyethylene glycol 400. Obtain medical attention.
Eye contact	If the substance has got into the eyes, immediately wash out with plenty of water at least 15 minutes. Obtain medical attention.
Ingestion	Rinse mouth. After swallowing make victim drink water (two glasses at the most), call in physician. Do not attempt to neutralize.

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

The most important known symptoms and effects are described in section 2.2 and section 11.

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

Not Available

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

In adaption to materials stored in the immediate neighborhood.

**5.2 Special hazards arising from the substance or mixture**

Non-combustible. Ambient fire may liberate hazardous vapors. The following may develop in event of fire: sodium oxides.

**5.3 Advice for firefighters**

Do not stay in dangerous zone without self-contained breathing apparatus. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

**5.4 Further information**

Contain escaping vapors with water. Prevent fire-fighting water from entering surface water or ground water.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Evacuate personnel to safe areas. Do not breathe vapors or spray mist. Shut off leaks if without risk. Keep people away from and upwind of spill/leak. For personal protective equipment see **Section 8**.

**6.2 Environmental precautions**

Do not allow to enter drinking water and sewerage system.

**6.3 Methods and materials for containment and cleaning up**

Carefully sweep up, gather and remove. Avoid generation of dusts. Keep in suitable, closed containers for disposal. Clean up affected area.

**6.4 Reference to other sections**

For disposal see **Section 13**.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Provision of good ventilation in the working area. Do not leave container open. Avoid spillage. Avoid rising dust.

**7.2 Conditions for safe storage, including any incompatibilities**

Keep tightly closed in a dry, cool and well-ventilated place. Keep out of direct sunlight and away from heat, water, moisture and incompatible materials. Requirements for containers, no aluminium, tin, zinc containers.

**7.3 Specific end use(s)**

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

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Derived No Effect Level (DNEL)**

Application Area	Health Effects	Exposure	Value
Worker	Long-term Local effects	Inhalation	1 mg/m <sup>3</sup>
Consumer	Long-term Local effects	Inhalation	1 mg/m <sup>3</sup>

**Predicted No Effect Concentration (PNEC)**

Not Available

**8.2 Exposure controls****Appropriate engineering controls**

The product should only be used in ventilation hoods and fans.

**Individual protection measures (Personal protective equipment, PPE)****Eye/face protection**

Goggles giving complete protection to eyes.

**Skin protection**

Chemical resistant apron / corrosive protective clothing, heavy duty work shoes.

Handle with gloves

- Full contact wears gloves from nitrile rubber material.
- Splash contact wears gloves from nitrile rubber material.

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

**Respiratory protection**

In case of insufficient ventilation, wear suitable respiratory equipment. Required when dusts are generated filter P2 (EN 143) or use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Environmental exposure controls**

Prevent liquid entering sewers, basements and workpits.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

Appearance: Form	Solid
: Color	White
Odour	Odorless
Odour Threshold	Not Available
pH	~14 at 50 g/l H <sub>2</sub> O at 20°C
Melting point/range	323 °C
Boiling point/range	1390 °C at 1013 hPa
Flash point	Not Available
Evaporation rate	Not Available
Flammability (solid, gas)	Not Available
Explosion limits: lower	Not Available
upper	Not Available
Vapor Pressure	Not Available
Relative Vapor Density	Not Available
Density	2.13 g/cm <sup>3</sup> at 20°C
Bulk density:	Not Available
Water solubility	1090 g/l at 20°C
Partition coefficient (n-octanol/water)	Not Available
Auto-Ignition temperature	Not Available
Decomposition Temperature	Not Available
Viscosity	Not Available
Explosive properties	Not Explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.

**SECTION 10: Stability and reactivity****10.1 Reactivity**

Hygroscopic

**10.2 Chemical stability**

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**

Risk of explosion in contact with bromine, acrylonitrile, butene-2-diol-1,4 (heat), calcium (powder), chloroform / acetone, chloropicrin, furfural, magnesium (humidity), methyl-3-pentene-2-ol-1, nitrobenzene / methanol, nitrobenzene / salt, nitromethane, nitroparaffines / salt, peroxides (rare), silver nitrate, tetrachlorobenzene + methanol / heat, 1,1,1-trichloroethanol; zinc (humidity), tin (humidity).

The substance can react dangerously with aluminium (powder), chlorine, fluorine, organic substances, phosphorus, acids, water, hydrogen peroxide, acetone, aluminium phosphide, ammonium salts (ammonia), chlorine trifluoride, dichloroethane (self-igniting), ethylene oxide, glycol derivatives, hydrogen halides, hydrazine hydrate, hydroquinone, hydroxylamine, potassium persulfate, maleic anhydride, phosphorus trioxide, 2-propenal, 2-propene-1-ol, acid chlorides, hydrogen sulfide, trichloroethene, chloroform, water/ combustible substances.

The substance polymerize in contact with aldol, diketene, epichlorohydrin.

**10.4 Conditions to avoid**

Exposure to moisture.

**10.5 Incompatible materials**

Unsuitable materials: Lead, Aluminium, Zinc, Tin.  
See **section 10.3**.

**10.6 Hazardous decomposition products**

Sodium oxides (Hazardous decomposition products from under fire condition).

**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity**

Not Available

**Acute oral toxicity**

Absorption

Symptoms: burns of mouth, pharynx, mucous membranes, oesophagus and gastrointestinal tract. Risk of perforation in the oesophagus and stomach.

**Acute inhalation toxicity**

Symptoms: burns of mucous membranes.

**Skin corrosion/irritation**

Burns

**Serious eye damage/eye irritation**

Burns. Risk of blindness.

**Respiratory or skin sensitization**

Not Available

**Germ cell mutagenicity**

Mutagenicity (mammal cell test): micronucleus s negative.  
Bacterial mutagenicity ( Escherichia coli) is negative.

**Carcinogenicity**

Not Available

**Reproductive toxicity**

Not Available

**Teratogenicity**

No teratogenic effect in animal experiments.

**Specific target organ toxicity (STOT) - single exposure**

Not Available

**Specific target organ toxicity (STOT) - repeated exposure**

Not Available

**Aspiration hazard**

Not Available

**Further information**

Systemic effects: Collapse, death.

The product should be handled with the care usual when dealing with chemicals.

## SECTION 12: Ecological information

**12.1 Toxicity**

Toxicity to fish

LC<sub>50</sub> Onchorhynchus mykiss: 45.4 mg/l /96h.

Toxicity to daphnia

EC<sub>50</sub> Daphnia magna: 76 mg/l /24 h.

and other aquatic invertebrates

**12.2 Persistence and degradability**

Biodegradability

Method for the determination of biodegradability is not applicable to inorganic substance.

**12.3 Bioaccumulative potential**

Partition coefficient (n-octanol/water)

Not Available

**12.4 Mobility in soil**

Not Available

**12.5 Other adverse effects**

Harmful effect on aquatic organisms. Toxic effect on fish and plankton. Harmful effect due to pH shift.

Forms corrosive mixtures with water even if diluted.

Does not cause biological oxygen deficit.

Neutralization possible in waste water treatment plants.

Do not allow to enter waters, waste water or soil.

## SECTION 13: Disposal considerations

**13.1 Waste treatment methods****Product**

There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding law and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste or burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

**Contaminated packaging**

Disposal in compliance with official regulations. Handle contaminated packaging as hazardous waste in the same way of the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

**SECTION 14: Transport information****Land Transport (ADR/RID)**

UN Number	1823
UN proper shipping name	SODIUM HYDROXIDE, SOLID
Transport hazard class(es)	8
Packing group	II
Environmental hazards	No
Special precautions for user	Yes

**Sea transport (IMDG)**

UN Number	1823
UN proper shipping name	SODIUM HYDROXIDE, SOLID
Transport hazard class(es)	8
Packing group	II
Marine pollutant	No
Special precautions for user	Yes
EmS	F-A S-B

**Air transport (IATA)**

UN Number	1823
UN proper shipping name	SODIUM HYDROXIDE, SOLID
Transport hazard class(es)	8
Packing group	II
Environmental hazards	No
Special precautions for user	No

**River transport (AND/ADNR)**

(Not examined)

**SECTION 15: Regulatory information**

This safety datasheet complies with the requirements of Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

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

Not Available

**15.2 Chemical Safety Assessment**

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

**SECTION 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.

**Recommended restrictions**

Take notice of labels and safety data sheets for the working.

**Reference**

Globally Harmonized System of Classification and Labelling of Chemicals (GHS).  
 Labelling according to EC Directives 67/548 EEC and Regulation (EC) No 1272/2008.  
 Transportation information according to Recommendations on the Transport of Dangerous Goods, Model Regulations. Twelfth revised edition. United Nations.

Institute for Occupational Safety and Health of the German Social Accident Insurance in Sankt Augustin/Germany,  
Source: IFA for Databases on hazardous substances (GESTIS).

**Further information**

Contact to RCI Labscan Limited.

**Revision Date**

01/05/2021

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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 unless specified in the text.