

## SAFETY DATA SHEET

according to EC directive 2001/58/EC  
Version 3.0 Revision Date 14.05.2007  
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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name : **Sodium hydroxide**

Product Number : 221465  
Brand : Sigma-Aldrich

Company : Sigma-Aldrich Pte Ltd  
(Co. Registration No. 199403788W)  
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### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : NaOH  
Molecular Weight : 40,00 g/mol

| CAS-No.                 | EC-No.    | Index-No.    | Classification | Concentration [%] |
|-------------------------|-----------|--------------|----------------|-------------------|
| <b>Sodium hydroxide</b> |           |              |                |                   |
| 1310-73-2               | 215-185-5 | 011-002-00-6 | C, R35         | -                 |

### 3. HAZARDS IDENTIFICATION

**Risk advice to man and the environment**  
Causes severe burns.

### 4. 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.

## 5. FIRE-FIGHTING MEASURES

### Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

### Further information

The product itself does not burn.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

### Environmental precautions

Do not let product enter drains.

### Methods for cleaning up

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

## 7. HANDLING AND STORAGE

### Handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

### Storage

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

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Personal protective equipment

#### 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).

#### Hand protection

Handle with gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.

#### Eye protection

Safety glasses

#### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form pellets

Colour white

## Safety data

|                       |   |
|-----------------------|---|
| pH                    | 13,0 - 14                                 |
| Melting point         | 318 °C                                    |
| Boiling point         | 1.390 °C                                  |
| Flash point           | not applicable                            |
| Ignition temperature  | no data available                         |
| Lower explosion limit | no data available                         |
| Upper explosion limit | no data available                         |
| Vapour pressure       | < 24,00 hPa at 20 °C<br>4,00 hPa at 37 °C |
| Density               | 2,1300 g/cm <sup>3</sup>                  |
| Water solubility      | no data available                         |

## 10. STABILITY AND REACTIVITY

### Storage stability

Stable under recommended storage conditions.

### Materials to avoid

Strong oxidizing agents, Strong acids, Organic materials

### Hazardous decomposition products

#### Hazardous decomposition products formed under fire conditions.

Sodium/sodium oxides

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

no data available

### Irritation and corrosion

Skin - rabbit - Severe skin irritation - 24 h

Eyes - rabbit - Severe eye irritation - 24 h

### Sensitization

no data available

### Chronic exposure

no data available

### Signs and Symptoms of Exposure

spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

### Potential Health Effects

#### Inhalation

May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

#### Skin

May be harmful if absorbed through skin. Causes severe skin burns.

#### Eyes

Causes severe eye burns.

#### Ingestion

May be harmful if swallowed. Causes severe burns.

## 12. ECOLOGICAL INFORMATION

### Elimination information (persistence and degradability)

no data available

### Ecotoxicity effects

Toxicity to fish LC50 - Gambusia affinis (Mosquito fish) - 125 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates. Immobilization EC50 - Daphnia - 40,38 mg/l - 48 h

### Further information on ecology

no data available

## 13. DISPOSAL CONSIDERATIONS

### Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

### Contaminated packaging

Dispose of as unused product.

## 14. TRANSPORT INFORMATION

### ADR/RID

UN-No.: 1823 Class: 8 Packing group: II  
Proper shipping name: SODIUM HYDROXIDE, SOLID

### IMDG

UN-No.: 1823 Class: 8 Packing group: II EMS-No: F-A, S-B  
Proper shipping name: SODIUM HYDROXIDE, SOLID  
Marine pollutant: No

### IATA

UN-No.: 1823 Class: 8 Packing group: II  
Proper shipping name: Sodium hydroxide, solid

## 15. REGULATORY INFORMATION

### Labelling according to EC Directives

EC Label

Hazard symbols

C Corrosive

R-phrases(s)

R35 Causes severe burns.

S-phrases(s)

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S37/39 Wear suitable gloves and eye/face protection.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

## 16. OTHER INFORMATION

### Further information

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