

# SODIUM HYDROXIDE

0360

October 2000

CAS No: 1310-73-2  
RTECS No: WB4900000  
UN No: 1823  
EC No: 011-002-00-6

Caustic soda  
Sodium hydrate  
Soda lye  
NaOH  
Molecular mass: 40.0

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
<b>FIRE</b>	Not combustible. Contact with moisture or water may generate sufficient heat to ignite combustible substances.		In case of fire in the surroundings: use appropriate extinguishing media.
<b>EXPLOSION</b>			

EXPOSURE		AVOID ALL CONTACT!	IN ALL CASES CONSULT A DOCTOR!
<b>Inhalation</b>	Corrosive. Burning sensation. Sore throat. Cough. Laboured breathing. Shortness of breath. Symptoms may be delayed (see Notes).	Local exhaust or breathing protection.	Fresh air, rest. Half-upright position. Artificial respiration may be needed. Refer for medical attention.
<b>Skin</b>	Corrosive. Redness. Pain. Serious skin burns. Blisters.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
<b>Eyes</b>	Corrosive. Redness. Pain. Blurred vision. Severe deep burns.	Face shield or eye protection in combination with breathing protection if powder.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
<b>Ingestion</b>	Corrosive. Burning sensation. Abdominal pain. Shock or collapse.	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Give plenty of water to drink. Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Sweep spilled substance into suitable containers. Wash away remainder with plenty of water. Personal protection: complete protective clothing including self-contained breathing apparatus.	C Symbol R: 35 S: (1/2-)26-37/39-45 UN Hazard Class: 8 UN Pack Group: II  Unbreakable packaging; put breakable packaging into closed unbreakable container. Do not transport with food and feedstuffs.

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-80GC6-II+III NFPA Code: H 3; F 0; R 1	Separated from strong acids, metals, food and feedstuffs. Dry. Well closed. Store in an area having corrosion resistant concrete floor.

### IMPORTANT DATA

**Physical State; Appearance**

WHITE, DELIQUESCENT SOLID IN VARIOUS FORMS, WITH NO ODOUR.

**Chemical dangers**

The substance is a strong base, it reacts violently with acid and is corrosive in moist air to metals like zinc, aluminium, tin and lead forming a combustible/explosive gas (hydrogen - see ICSC 0001). Reacts with ammonium salts to produce ammonia, causing fire hazard. Attacks some forms of plastics, rubber or coatings. Rapidly absorbs carbon dioxide and water from air. Contact with moisture or water may generate heat (see Notes).

**Occupational exposure limits**

TLV: 2 mg/m<sup>3</sup> (Ceiling value) (ACGIH 2004).  
MAK: IIb (not established but data is available) (DFG 2004).

**Routes of exposure**

The substance can be absorbed into the body by inhalation of its aerosol and by ingestion.

**Inhalation risk**

Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly.

**Effects of short-term exposure**

Corrosive. The substance is very corrosive to the eyes, the skin and the respiratory tract. Corrosive on ingestion. Inhalation of an aerosol of the substance may cause lung oedema (see Notes).

**Effects of long-term or repeated exposure**

Repeated or prolonged contact with skin may cause dermatitis.

### PHYSICAL PROPERTIES

Boiling point: 1390/C  
Melting point: 318/C

Density: 2.1 g/cm<sup>3</sup>  
Solubility in water, g/100 ml at 20°C: 109

### ENVIRONMENTAL DATA

This substance may be hazardous to the environment; special attention should be given to water organisms.

### NOTES

The occupational exposure limit value should not be exceeded during any part of the working exposure. The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential.  
NEVER pour water into this substance; when dissolving or diluting always add it slowly to the water.  
Other UN number: UN1824 Sodium hydroxide solution, Hazard class 8.  
Card has been partly updated in October 2005. See sections Occupational Exposure Limits, Emergency Response.

### ADDITIONAL INFORMATION

**LEGAL NOTICE**

Neither the EC nor the IPCS nor any person acting on behalf of the EC or the IPCS is responsible for the use which might be made of this information