

# Material Safety Data Sheet

## SECTION I - COMPANY IDENTIFICATION

**PRODUCT:** Sodium Hydroxide

**MSDS. NO.:**CP/MSDS/SH/2

**MANUFACTURED BY:**

**TELEPHONE NUMBERS:**

Office:

Fax:

## SECTION II - HAZARDOUS INGREDIENTS

**OSHA Hazardous Components (29 CFR 1910.1200)**

**EXPOSURE LIMITS: 8 HR. TWA**

**OSHA PEL**

**ACGIH TLV**

Sodium Hydroxide (CAS# 1310-73-2)

CL 2 mg/m<sup>3</sup>

CL 2 mg/m<sup>3</sup>

## SECTION III - HAZARDS IDENTIFICATIONS

**EMERGENCY OVERVIEW:**DANGER! Corrosive to all body tissues. Avoid contact with skin or eyes. Harmful if inhaled or swallowed.

### POTENTIAL HEALTH EFFECTS:

**INHALATION:** Inhalation of vapor or mist is corrosive to respiratory tract.

**EYE CONTACT:** Liquid or vapors are corrosive to eyes.

**SKIN CONTACT:** Liquid or vapors are corrosive to skin.

**INGESTION:** Toxic. May cause severe damage, perforation, and scarring of gastrointestinal tract.

**CHRONIC Effects:** Chemical pneumonitis.

### NOTE:

**CARCINOGENICITY:** LISTED IN NTP? No  
Regulated? No

IARC? No

OSHA

## SECTION IV - FIRST AID MEASURES

### Ingestion:

Never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Rinse mouth thoroughly with water. Do not induce vomiting. If victim can swallow, have him/her drink 250 to 300 mL of water to dilute material in stomach. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Repeat administration of water. Obtain medical attention immediately.

### Eye Contact:

Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 30 minutes, by the clock, holding the eyelid(s) open. Take care not to rinse contaminated water into the non-affected eye. If irritation persists, repeat flushing. If available, a neutral saline solution may be used to flush the contaminated eye(s) an additional 30 minutes. Obtain medical attention immediately.

### Skin Contact:

First aiders avoid direct contact with this chemical. As quickly as possible, flush contaminated area with lukewarm, gently running water for at least 30 minutes, by the clock. Under running water, remove contaminated clothing, shoes, and leather goods (e.g. watchbands, belts). If irritation persists, repeat flushing. Obtain medical attention immediately. Completely decontaminate clothing, shoes and leather goods before re-use or discard.

### Inhalation:

Remove source of contamination or move victim to fresh air. Obtain medical advice immediately.

### Other First Aid:

Provide general supportive measures (comfort, warmth, rest). Consult a physician and/or the nearest Poison Control Centre for all exposures except minor instances of inhalation contact.

### Notes to physician:

Treat symptomatically as for strong alkalis.

#### SECTION V - FIRE FIGHTING MEASURES

**FLASHPOINT (TEST METHOD):** None

**FLAMMABLE LIMITS:** LOWER: NA UPPER: NA  
**AUTOIGNITION TEMPERATURE:** NA

**GENERAL HAZARD:** Toxic fumes of  $\text{Na}_2\text{O}$ ,  $\text{SO}_x$

**FIRE FIGHTING INSTRUCTIONS:** Approach fire from upwind side. Avoid breathing smoke, fumes, mist, or vapors on the downwind side. Firefighters wear protective clothing and self contained breathing apparatus.

**EXTINGUISHING MEDIA:** Dry powder, carbon dioxide ( $\text{CO}_2$ ), water fog or spray.

**HAZARDOUS COMBUSTION PRODUCTS:** Smoke, toxic fumes of  $\text{Na}_2\text{O}$ ,  $\text{CO}$ ,  $\text{CO}_2$ ,  $\text{SO}_x$ .

#### SECTION VI - ACCIDENTAL RELEASE MEASURES

**Spill/Leak:** Notify safety personnel, isolate hazard area, deny entry, and stay upwind of spills. Cleanup personnel should protect against vapor

Inhalation and skin or eye contact. Use water spray to disperse vapors, but do not spray directly on spills. For small dry spills, avoid excess dust

Generation by carefully scooping or vacuuming (with appropriate filter) into a suitable container (above  $60^\circ\text{C}$  sodium hydroxide corrodes steel)

For later disposal. For large dry spills, cover with plastic sheet or other impermeable layer and contain for later disposal.

#### SECTION VII - HANDLING AND STORAGE

**HANDLING:** Avoid contact with skin, eyes, and clothing. After handling this product, wash hands before eating, drinking, or smoking. If contact occurs, remove contaminated clothing. If needed, take first aid action shown in section IV. Launder contaminated clothing before reuse.

**STORAGE:** Store away from strong acid, acidic materials.

#### SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Local exhaust recommended.

**PERSONAL PROTECTION:** Wear chemical impervious gloves and full face shield. Use boots, aprons, drench showers, eye wash as needed for protection against spills and/or splashes.

#### SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

**VAPOR PRESSURE:** ND

**SPECIFIC GRAVITY:** 2.13 at  $77^\circ\text{F}$  ( $25^\circ\text{C}$ )

**SOLUBILITY IN WATER:** Complete

**pH(0.5% Solution) :** 13

**BOILING POINT:**  $2534^\circ\text{F}$  ( $1390^\circ\text{C}$ )

**APPEARANCE & ODOR:** Odorless, hygroscopic (readily absorbs water) white flakes

#### SECTION X - STABILITY AND REACTIVITY

**STABILITY:** Stable.

**CONDITIONS TO AVOID:** High temperatures.

**MATERIALS TO AVOID:** Strong acids, acidic materials.

**HAZARDOUS DECOMPOSITION PRODUCTS:** From combustion: smoke, carbon monoxide, carbon dioxide, oxides of sulfur,  $\text{Na}_2\text{O}$ .

**HAZARDOUS POLYMERIZATION:** Will not occur.



**SECTION XI - TOXICOLOGICAL INFORMATION**

Sodium hydroxide	LDLo: 500 mg/kg	(oral - rat)
	50 g/24 hr	(eye - rabbit)
	500 mg/24 hr	SEV (skin - rabbit)

**SECTION XII - ECOLOGICAL INFORMATION**

Sodium hydroxide	125 ppm / 96 hr / mosquito fish / TLm / fresh water
	180 ppm / 23 hr / oysters / lethal / salt water

**SECTION XIII - DISPOSAL CONSIDERATIONS**

Dispose as hazardous waste. Classification and documentation is required before disposal. Follow all local, state and federal regulations.

**SECTION XIV - TRANSPORTATION INFORMATION**

**PROPER SHIPPING NAME:** Sodium Hydroxide, flakes  
**Packing Group:** II  
**HAZARD CLASS:** 8  
**IDENTIFICATION NUMBER:** UN 1823  
**DOT Packaging Exceptions:** 173.244  
**IMDG** 8226

**SECTION XV - REGULATORY INFORMATION**

Classified as hazardous according to the criteria of NOHSC, Schedule 6 poison according to SUSDP, Class 8 according to ADG

**R-phrases:** R35, causes severe burns and R41, risk of serious damage to eyes.

**S-phrases:** S2, keep out of reach of children, 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.

**SECTION XVI - OTHER INFORMATION**

HMIS ratings	Health: 3* Flammability: 0 Physical hazard: 1 Personal protection: D
--------------	---

NFPA ratings	Health: 3 Flammability: 0 Instability: 1
--------------	--

Disclaimer	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.
------------	--