



MATERIAL SAFETY DATA SHEET (CAUSTIC SODA)

I. PRODUCT IDENTIFICATION

Chemical Name : Sodium Hydroxide
Trade Name : Caustic Soda, 50 %
Synonyms : Liquid Caustic Soda, Caustic,
Soda Lye, Lye Solution

II. COMPOSITION / INGREDIENTS

Sodium Hydroxide, % : 48 – 52 % by weight
Chemical Formula : NaOH
Molecular Weight : 40 g/mole
CAS Registry No. : 1310-73-2

III. HAZARDS IDENTIFICATION

THIS PRODUCT MAY BE : corrosive, toxic and a major potential hazard upon contact to skin and eyes.

TOXICITY ROUTES OF EXPOSURE : Ingestion can cause severe burning and pain in lips, mouth, tongue, throat and stomach. Death can result from ingestion.

OVEREXPOSURE : Causes burns and scarring.
Can cause serious damage to all body tissues contacted.

CANCER INFORMATION : Not applicable

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Chronic eye or skin conditions

IV. FIRST AID MEASURES

SKIN : Remove contaminated clothing and immediately wash skin for a minimum of 15 minutes. Call or see a physician.

EYES : Immediately flush eyes with large amount of water, occasionally lifting the upper and lower eyelids and rotating the eyeballs. Continue flushing for a minimum of 15 minutes. See a physician.

INHALATION : Remove to fresh air. If breathing stops, administer artificial respiration. See a physician.

INGESTION : DO NOT induce vomiting. If person is conscious, give 2 or more glasses of water. If unconscious, never give anything by mouth. See a physician immediately.

V. FIRE FIGHTING MEASURES

Autoignition Point : Not Applicable

Flammability/Explosive limits : Not Applicable

Fire/Explosion Hazards: Contact with strong acids may generate enough heat to ignite combustibles.

Fire Prevention : Not Applicable

VI. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR RELEASE : Completely contain spilled material with dikes, sandbags, etc., and prevent run off into the ground or surface waters or sewers. Recover as much caustic material as possible into containers for disposal. Add water and neutralize remaining caustic material with dilute hydrochloric acid, citric acid or another solid acidic material to a pH between 6 and 9. Collect neutralized caustic with a dry sorbent. Flush residual neutralized waste to the drain with excess water.

VII. HANDLING AND STORAGE

Storage Requirements: Keep container tightly closed.

FOR SMALL VOLUMES : Maybe stored in plastic jugs.

FOR LARGE VOLUMES ; Store in steel storage tanks.

INCOMPATIBLE MATERIALS : Store away from acids.
(Refer to Section X)

VIII. EXPOSURE CONTROLS AND PROTECTION

Adequate ventilation needed. TLV C : 2 mg/m³

Protective Equipment for the eyes and skin :

Goggles, respirator, disposable latex/ rubber apron,
PVC rain suit, rubber boots with pant legs over boots.

Precautionary Hygiene/control measures :

Avoid contact with skin, eyes, and clothing.

Do not breathe mist or vapor. Wash thoroughly after handling. Safety showers and eye wash fountains should be available in storage and handling area.

IX. PHYSICAL AND CHEMICAL PROPERTIES

STATE : liquid

APPEARANCE : colorless or slightly turbid

ODOR : Irritating

pH : Strong base >14

BOILING POINT : 145 °C for ~50% NaOH Solution

FLASH POINT : Not determined

SPECIFIC GRAVITY : 1.51-1.54

VAPOR PRESSURE : ~6.3 mm Hg @ 40°C

SOLUBILITY IN : WATER: miscible, ACID : miscible



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X. STABILITY AND REACTIVITY

Stable under normal handling conditions. Materials and conditions to avoid (incompatibility) are:

- Chlorinated hydrocarbons, acetaldehyde, acrolein, aluminum, chlorine trifluoride, hydroquinone, maleic anhydride, and phosphorous pentoxide.
- Dilution with water evolves large quantity of heat.

Hazardous decomposition & combustion product = none
Hazardous polymerization will not occur.

XI. TOXICOLOGICAL INFORMATION

Effects from skin contact – Contact with skin can cause severe burns with deep ulcerations. Contact with solution or mist can cause multiple burns with temporary loss of hair at burn site.

Effects from eye contact – Liquid in the eye can cause severe destruction and blindness. These effects can occur rapidly affecting all parts of the eye. Mist can cause irritation with high concentration causing destructive burns.

XII. ECOLOGICAL INFORMATION

ECOTOXICITY DATA : High basicity may pose potential hazard to plant and marine life.

XIII. DISPOSAL CONSIDERATIONS

Dispose of in accordance with all Government and Local regulations.

XIV. TRANSPORT INFORMATION

Transportation of Dangerous Goods

TDG Classification: Do not ship by air.

DOT Hazard Classification: Class 8 : Corrosive

DOT Shipping Name : Sodium Hydroxide ID: UN1824

XV. REGULATORY INFORMATION

No data available

XVI. OTHER INFORMATION

This MSDS contains information under the sixteen (16) section headings written in accordance with the International Standard ISO 11014 "Safety Data Sheet for Chemical Products".

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