

EMS CATALOG NO: 21170-01
EMS PRODUCT: Sodium Hydroxide, 1.0N
DATE: 06/15/2006
PAGE NUMBER: One of 9

MATERIAL SAFETY DATA SHEET

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FOR PRODUCT AND SALES INFORMATION

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PRODUCT IDENTIFICATION

PRODUCT NAME: Sodium Hydroxide, 1.0N
SYNONYM: Not available.
CHEMICAL FORMULA: Not applicable.
CHEMICAL FAMILY: Alkali.
CAS# Not applicable.

COMPOSITION AND INFORMATION ON INGREDIENTS

NAME:	Sodium Hydroxide	Water
CAS#:	1310-73-2	7732-18-5
% BY WEIGHT:	4	96
CEIL (mg/m3):	2	

TOXICOLOGICAL DATA ON INGREDIENTS:

<u>Sodium Hydroxide</u>	<u>Water</u>
LD50: Not available.	Not available.
LC50: Not available.	Not available.

HAZARDS IDENTIFICATION

POTENTIAL ACUTE HEALTH EFFECTS:

Very dangerous in case of skin contact (corrosive, irritant), of eye contact (irritant), of ingestion. Slightly dangerous to dangerous in case of inhalation. Not dangerous in case of skin contact (non-sensitizer for skin). Corrosive to eyes and skin. Corrosive to skin and eyes on contact. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. This product may irritate eyes and skin upon contact. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

POTENTIAL CHRONIC HEALTH EFFECTS:

Not dangerous in case of skin contact (non-corrosive for skin, non-irritant for skin, non-permeator by skin), of eye contact (non-irritant), of ingestion, of inhalation.

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

The substance is toxic to lungs, mucous membranes Toxicity of the product to the reproductive system: Not available. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

FIRST AID MEASURES

EYE CONTACT:

Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. Rinse with a dilute solution of boric acid. Finish by rinsing thoroughly with running water to avoid a possible infection. COLD water may be used.

SKIN CONTACT:

If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical touches the victim's exposed skin such as the hands. Neutralize exposed skin with a dilute solution of boric acid or acetic acid. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. COLD water may be used. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

SERIOUS SKIN CONTACT:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

INHALATION:

Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

SERIOUS INHALATION:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. if breathing is difficult, administer oxygen.

If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

INGESTION:

DO NOT induce vomiting. Have conscious person drink several glasses of water or milk. Seek immediate medical attention.

SERIOUS INGESTION:

DO NOT induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

FIRE AND EXPLOSION DATA

FLAMMABILITY OF THE PRODUCT: Non-flammable.

AUTO-IGNITION TEMPERATURE: Not applicable.

FLASH POINTS: Not applicable.

FLAMMABLE LIMITS: Not applicable.

PRODUCTS OF COMBUSTION: Not applicable.

FIRE HAZARDS IN PRESENCE OF VARIOUS SUBSTANCES: Not applicable.

EXPLOSION HAZARDS IN PRESENCE OF VARIOUS SUBSTANCES:

RISKS OF EXPLOSION OF THE PRODUCT IN PRESENCE OF MECHANICAL

IMPACT: Not available.

RISKS OF EXPLOSION OF THE PRODUCT IN PRESENCE OF STATIC

DISCHARGE: Not available.

No specific information is available in our database regarding the product's risks of explosion in the presence of various materials.

FIRE FIGHTING MEDIA AND INSTRUCTIONS: Non-flammable.

SPECIAL REMARKS ON FIRE HAZARDS: No additional remark.

SPECIAL REMARKS ON EXPLOSION HAZARDS: No additional remark.

ACCIDENTAL RELEASE MEASURES

SMALL SPILL:

Dilute with water and mop up, or absorb with an inert DRY material and place in an appropriate waste disposal container. If necessary: **Neutralize the residue with a dilute solution of acetic acid.**

LARGE SPILL:

Corrosive liquid.

Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. DO NOT get water inside container. DO NOT touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. **Neutralize the residue with a dilute solution of acetic acid.**

HANDLING AND STORAGE

PRECAUTIONS:

Keep container dry. DO NOT ingest. Do not breathe gas, fumes, vapor or spray. Never add water to this product. In case of insufficient ventilation wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles as moisture.

STORAGE:

Alkalis may be stored in heavy duty gauge steel containers. Corrosive materials should be stored in a separate safety storage cabinet or room.

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash

station and safety shower is proximal to the work-station location.

PERSONAL PROTECTIONS:

Splash goggles. Full suit. Vapor respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Gloves (impervious). Boots. Wear appropriate respirator when ventilation is inadequate.

PERSONAL PROTECTION IN CASE OF A LARGE SPILL:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

EXPOSURE LIMITS:

Sodium hydroxide

CEIL: 2 (mg/m³) from ACGIH [1995]

Consult local authorities for acceptable exposure limits.

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE AND APPEARANCE: Liquid

ODOR: Odorless.

TASTE: Not available.

COLOR: Clear Colorless.

MOLECULAR WEIGHT: Not applicable.

pH (1% SOLN/WATER): Basic.

BOILING POINT: 100°C (212°F)

MELTING POINT: Not available.

CRITICAL TEMPERATURE: Not available.

SPECIFIC GRAVITY: Weighted average: 1.02 (Water = 1)

VAPOR PRESSURE: 17.535 mm of Hg (@20°C) based on data for: Water

VAPOR DENSITY: 0.62 (Air = 1) based on data for: Water

VOLATILITY: Not available.

ODOR THRESHOLD: Not available.

WATER/OIL DIST. COEFF.: Not available.

IONICITY (IN WATER): Not available.

DISPERSION PROPERTIES: See solubility in water.

SOLUBILITY: Easily soluble in cold water, hot water.

STABILITY AND REACTIVITY DATA

STABILITY: The product is stable.

INSTABILITY TEMPERATURE: Not available.

CONDITIONS OF INSTABILITY: No additional remark.

INCOMPATIBILITY WITH VARIOUS SUBSTANCES:

CORROSIVITY: Very slightly to slightly corrosive in presence of glass.

SPECIAL REMARKS ON REACTIVITY: No additional remark.

SPECIAL REMARKS ON CORROSIVITY: No additional remark.

POLYMERIZATION: No.

TOXICOLOGICAL INFORMATION

ROUTES OF ENTRY: Ingestion. Inhalation.

TOXICITY TO ANIMALS:

LD50: Not available.

LC50: Not available.

CHRONIC EFFECTS ON HUMANS: The substance is toxic to lungs, mucous membranes.

TOXICITY OF THE PRODUCT TO THE REPRODUCTIVE SYSTEM: Not available.

OTHER TOXIC EFFECTS ON HUMANS: Very dangerous in case of skin contact (corrosive, irritant), of eye contact (irritant), of ingestion. Slightly dangerous to dangerous in case of inhalation. Not dangerous in case of skin contact (non-sensitizer for skin).

SPECIAL REMARKS ON TOXICITY TO ANIMALS: No additional remark.

SPECIAL REMARKS ON CHRONIC EFFECTS ON HUMANS: No additional remark.

SPECIAL REMARKS ON OTHER TOXIC EFFECTS ON HUMANS: No additional remark.

ECOLOGICAL INFORMATION

ECOTOXICITY: Not available.

BOD5 AND COD: Not available.

PRODUCTS OF BIODEGRADATION: Some metallic oxides.

TOXICITY OF THE PRODUCTS OF BIODEGRADATION: The products of

degradation are less toxic than the product itself.
SPECIAL REMARKS ON THE PRODUCTS OF BIODEGRADATION: No additional
remark.

DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Recycle to process, if possible. Consult your
local or regional authorities.

TRANSPORT INFORMATION

DOT CLASSIFICATION: DOT CLASS 8: Corrosive liquid.
IDENTIFICATION: Sodium Hydroxide, solution (Sodium Hydroxide)
UN1824 III
SPECIAL PROVISIONS FOR TRANSPORT: No additional remark.

OTHER REGULATORY INFORMATION

FEDERAL AND STATE REGULATIONS:
THE FOLLOWING PRODUCT(S) IS (ARE) LISTED BY THE STATE OF
MASSACHUSETTS: **SODIUM HYDROXIDE**
THE FOLLOWING PRODUCT(S) IS (ARE) LISTED BY THE STATE OF
PENNSYLVANIA: **SODIUM HYDROXIDE**
THE FOLLOWING PRODUCT(S) IS (ARE) LISTED ON TSCA: **SODIUM
HYDROXIDE, WATER**

OTHER REGULATIONS:
OSHA: Hazardous by definition of Hazard Communication
Standard (29 CFR 1910.1200)

OTHER CLASSIFICATIONS:
WHMIS(CANADA): WHMIS CLASS D-2A: Material causing other
toxic effects (VERY TOXIC).
WHMIS CLASS E: Corrosive liquid.
DSCL (EEC): R35-Causes severe burns.
R42-May cause sensitization by inhalation.
R36/37/38-Irritating to eyes, respiratory
system and skin.

HMIS (U.S.A.):

HEALTH HAZARD: 3
FIRE HAZARD: 0
REACTIVITY: 0
PERSONAL PROTECTION: j

NATIONAL FIRE PROTECTION ASSOCIATION (U.S.A.)

HEALTH: 3
FLAMMABILITY: 0
REACTIVITY: 0
SPECIFIC HAZARD: ALK

PROTECTIVE EQUIPMENT:

Gloves (impervious).

Full suit.

Vapor respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Splash goggles.