Mettler-Toledo, Inc.

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Material Safety Data Sheet

EMERGENCY NUMBERS:

(USA) CHEMTREC : 1(800) 424-9300 (24hrs)
(CAN) CANUTEC : 1(613) 996-6666 (24hrs)

WHMIS	Protective Clothing	TDG Road/Rail
WHMIS CLASS: E		Not controlled under TDG (Canada). Not applicable (PIN and PG).
		

Section I. Product Identification and Uses

Product name	**SODIUM HYDROXIDE, 0.1% SOLUTION, W/V**
Chemical formula	Not applicable.
Synonyms	SH001, SH002

CI#	Not available.
CAS#	Not applicable.
Code	SH001
Formula weight	Not applicable.
Supersedes	

Material uses	For laboratory use only.

Section II. Ingredients

Name	CAS #	%	TLV
1) SODIUM HYDROXIDE	1310-73-2	<0.1	Exposure limits: ACGIH Ceiling limit 2 mg/m3
2) WATER	7732-18-5	Balance	Not established by ACGIH

Toxicity values of the hazardous ingredients	SODIUM HYDROXIDE: INTRAPERITONEAL (LD50): Acute: 40 mg/m3 (Mouse).

Section III. Physical Data

Physical state and appearance / Odor	Colorless liquid. Odorless.
pH (1% soln/water)	>7
Odor threshold	Not available.
Percent volatile	Not available.
Freezing point	Not available.
Boiling point	Not available.
Specific gravity	Not available.
Vapor density	Not available.
Vapor pressure	Not available.
Water/oil dist. coeff.	Not available.
Evaporation rate	Not available.
Solubility	Miscible in water.

Section IV. Fire and Explosion Data

Flash point	Not applicable.
Flammable limits	Not applicable.
Auto-ignition temperature	Not available.
Fire degradation products	Sodium oxide.
Fire extinguishing procedures	Use extinguishing media appropriate to surrounding fire conditions. Take care not to splash or splatter the material. Wear adequate personal protection to prevent contact with material or its combustion products. Self contained breathing apparatus with a full facepiece operated in a pressure demand or other positive pressure mode. Cool containing vessels with flooding quantities of water until well after fire is out.
Fire and Explosion Hazards	Reacts with most common metals to produce hydrogen (explosive and flammable gas). Not expected to be sensitive to static discharge. Not expected to be sensitive to mechanical impact. Emits toxic fumes under fire conditions.

Section V. Toxicological Properties

Routes of entry	Ingestion and inhalation. Eye contact. Skin contact. Skin absorption.
Effects of Acute Exposure	Harmful by ingestion, inhalation or skin absorption. Corrosive. Acute effects may be delayed. Target organs: eyes, skin, respiratory system. 10 mg/m3 (SODIUM HYDROXIDE) is immediately dangerous to life or health.
Eye	Corrosive. Causes burns and loss of vision. Causes corneal scarring and clouding. Glaucoma, cataracts and permanent blindness may occur. IRRITATION: EYE-RABBIT 50 ug/24H SEVERE (NaOH).
Skin	Prolonged contact can cause severe irritation or even burns. Causes burns which may be delayed. IRRITATION: SKIN-RABBIT 500 mg/24H SEVERE (NaOH).
Inhalation	Material is destructive to tissue of the mucous membranes and upper respiratory tract. Inhalation may be fatal as a result of spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, laryngitis, dyspnea, headache, nausea, and vomiting. May cause severe pneumonitis. May cause delayed lung injury.
Ingestion	Burns in mouth, pharynx and gastrointestinal tract. May cause pain, vomiting, diarrhea, abdominal pain, inflammation of the larynx, extensive damage or perforation of the esophagus, collapse. May be fatal.

Section V. Toxicological Properties

Effects of Chronic Overexposure	May result in areas of destruction of skin tissue or primary irritant dermatitis. Similarly, inhalation of vapors or mists may cause varying degrees of damage to the affected tissues ans also increasing susceptibility to respiratory illness. Sodium hydroxide has been implicated as a cause of cancer of the esophagus in individuals who have ingested it. The cancer may develop 12 to 42 years after the ingestion incident. Similar cancers have been observed at the sites of severe thermal burns. These cancers may be due to tissue destruction and scar formation rather than the sodium hydroxide. Mutagenic effects: Not available. Teratogenic effects: Not available. Toxicity of the product to the reproductive system: Not available. To the best of our knowledge, the chemical, physical, and toxicity of this substance has not been fully investigated.

Section VI. First Aid Measures

Eye contact	Wash eyes and skin with copious quantities of water for at least 30 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, repeat flushing. Seek immediate medical attention. Do not transport victim until the recommended flushing period is completed unless flushing can be continued during transport. Immediate first aid is needed to prevent eye damage. Washing within 1 minute is essential to achieve maximum effectiveness.
Skin contact	Immediately flush skin with plenty of water for at least 30 minutes while removing contaminated clothing and shoes. If irritation persists, repeat flushing. Seek immediate medical attention. Do not transport victim until the recommended flushing period is completed unless flushing can be continued during transport.
Inhalation	Remove patient to fresh air. Administer approved oxygen supply if breathing is difficult. Administer artificial respiration or CPR if breathing has ceased. Seek immediate medical attention.
Ingestion	DO NOT induce vomiting. If conscious, wash out mouth with water. Have conscious person drink several glasses of water to dilute. Seek immediate medical attention. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water. Never give anything by mouth to an unconscious or convulsing person.

Section VII. Reactivity Data

Stability	Unstable. Absorbs carbon dioxide and moisture from air. Conditions to avoid: High temperatures, sparks, open flames and all other sources of ignition, contamination.
Hazardous decomp. products	Not available.
Incompatibility	Acids, acid anhydrides, acid chlorides, water, flammable/combustible materials, organic materials, peroxides, organohalogen compounds (may react to form spontaneously combustible materials), nitro and chloro organic compounds (may react explosively), chlorohydrin, maleic anhydride, nitromethane, nitropropane, nitroparaffins, phosphorus, phosphorus oxides, 1,2-dichloroethylene, chlorosulfonic acid, trichloroethylene, chloroform, tetrachlorobenzene, chlorine trifluoride, chloronitrotoluenes, tetrahydrofuran, sugars. Acroleine, acrylonitrile, acetaldehyde (Violent polymerization). Reacts with most common metals to produce hydrogen (aluminum, zinc, lead, tin, brass, bronze, etc...). May attack some forms of plastics, rubbers and coatings.
Reaction Products	Will corrode a wide variety of metals. Contact with nitro organic compounds may form shock sensitive materials. This product may react with various sugars to form hazardous carbon monoxide. Hazardous polymerization will not occur.

Section VIII. Preventive Measures

Protective Clothing in case of spill and leak	Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves. Full suit.
Spill and leak	Evacuate the area. Eliminate all sources of ignition. Absorb on sand or vermiculite and place in a closed container for disposal. Ventilate area and wash spill site after material pick up is complete. DO NOT empty into drains. DO NOT touch damaged container or spilled material. Solutions are very slippery causing a slipping hazard on floors.
Waste disposal	Neutralize carefully with weak acid to pH 6 to 8. Dispose of waste material at an approved (hazardous) waste treatment/ disposal facility in accordance with applicable local, provincial and federal regulations. Harmful to aquatic life at low concentrations. Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds, or rivers.
Storage and Handling	Store in a cool place away from heated areas, sparks, and flame. Store in a well ventilated area. Store away from incompatible materials. Do not add any other material to the container. Do not wash down the drain. Do not breathe gas/fumes/vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. Keep container tightly closed and dry. Manipulate in a well ventilated area or under an adequate fume hood. Empty containers may contain a hazardous residue. Handle and open container with care. Take off immediately all contaminated clothing. Avoid contact with a combustible material (wood, paper, oil, clothing...). This product must be manipulated by qualified personnel. Do not get in eyes, on skin, or on clothing. Wash well after use. In accordance with good storage and handling practices. Do not allow smoking and food consumption while handling. After handling, always wash hands thoroughly with soap and water. In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible.).

Section IX. Protective Measures

Protective clothing	Face shield and splash goggles. Impervious rubber gloves, apron, coveralls, and/or other resistant protective clothing. Sufficient to protect skin. Have available and use as appropriate: rubber suits, aprons, and boots. A OSHA/MSHA jointly approved respirator is advised in the absence of proper environmental controls. If more than TLV, do not breathe vapor. Wear self-contained breathing apparatus. Ensure that eyewash station and safety shower is proximal to the work-station location. Have available and use as appropriate: face shields, rubber suits, aprons, and boots.
Engineering controls	Use only in a chemical fume hood to keep airborne levels below recommended exposure limits. Ventilation should be corrosion proof. Do not use in unventilated spaces.

Section X. Other Information

Special Precautions or comments

Corrosive! Risk of serious damage to eyes. Corrosive effects on the skin and eyes may be delayed, and damage may occur without the sensation or onset of pain. Strict adherence to first aid measures following any exposure is essential. Do not breathe vapor. Avoid all contact with the product. Avoid prolonged or repeated exposure. Use only in a chemical fume hood. Absorbs carbon dioxide from air. Handle and open container with care. Container should be opened only by a technically qualified person.
Synergistic materials: Not available.
RTECS NO: WB4900000 (Sodium hydroxide).

NFPA

Prepared by MSDS Department/Département de F.S..

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