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MATERIAL SAFETY DATA SHEET

MSDS No.: SS0550
Revision Date: January 12, 2012
Approved by: James A. Bertsch

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Section 1 Chemical Product and Company Information

Product SODIUM HYDROXIDE, ANHYDROUS

Synonyms Caustic Soda

CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300

Section 2 Hazards Identification

Emergency Overview

DANGER! CORROSIVE!

CAUSES SEVERE SKIN AND EYE BURNS. MAY BE FATAL IF SWALLOWED. Deliquescent. Product can react violently with acids and other substances. Avoid contact with skin, eyes and clothing. Store in a cool place. Target organs: Respiratory and gastrointestinal tracts, eyes, skin.

0 = Minimal
1 = Slight
2 = Moderate
3 = Serious
4 = Severe

Health	3
Fire	0
Reactivity	2
Contact	4

HMIS *

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	TLV Units
Sodium hydroxide	1310-73-2	96-100%	TWA: C 2 mg/m ³ (ACGIH 2001)

Section 4 First Aid Measures

INGESTION: Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN CONTACT: Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

General information: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Contact with metals can generate hydrogen gas. Contact with water produces intense heat and highly irritating and corrosive mist. Hot or molten material will react violently with water liberating heat and causing splashing. Contact with water may generate sufficient heat to ignite combustible materials.

Extinguishing Media: Flood with water, taking care not to splash or scatter. Avoid carbon dioxide as it reacts exothermically with this material.

Flash Point: Non-flammable.

Autoignition temperature: N/A

Explosion Limits: Lower: N/A **Upper:** N/A

0 = Minimal
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2 = Moderate
3 = Serious
4 = Severe



Section 6 Accidental Release Measures

Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water. Avoid runoff into storm sewers and ditches which lead to waterways.

(2008 EMERGENCY RESPONSE GUIDEBOOK, (PHH50-ERG2008), GUIDE # 154)

Section 7 Handling & Storage CORROSIVE STORAGE CODE WHITE

Read label on container before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Handling: Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid ingestion. Do not inhale dusts. Wash thoroughly after handling. Remove and wash clothing before reuse.

Storage: Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 Exposure Controls / Personal Protection

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: Use a chemical fume hood and/or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Physical state: Solid.

Appearance: White pellets or beads. Hygroscopic.

Odor: No odor.

pH: N/A

Vapor pressure (mm Hg): 1 mm Hg @ 739°C

Vapor Density (Air = 1): N/A

Evaporation rate (Butyl acetate = 1): N/A

Viscosity: N/A

Boiling point: 1390°C (2534°F)

Freezing / Melting point: 318°C (604°F)

Decomposition temperature: N/A

Solubility: 29.6 @ 0°C (32°F)

Specific gravity (H₂O = 1): 2.13 @ 25°C (77°F)

Percent volatile (%): N/A

Molecular formula: NaOH

Molecular weight: 40.00

Section 10 Stability & Reactivity

Chemical stability: Stable

Hazardous polymerization: Will not occur.

Conditions to avoid: Deliquescent material. Absorbs moisture from air. Can react with carbon dioxide to form sodium carbonate.

Incompatibilities with other materials: Metals, acids, organic compounds, organic nitro compounds.

Hazardous decomposition products: Sodium oxide. Reacts with metals to form flammable and explosive hydrogen gas.

Section 11 Toxicological Information

Effects of overexposure: SKIN: Severe and rapid corrosion on contact. Extent of damage depends on duration of contact. EYES: Rapidly causes severe damage. Permanent corneal damage almost inevitably results. INHALATION: The effects of inhalation can vary, depending upon extent of exposure, from mild membrane irritation to sudden, severe bronchopneumonia. INGESTION: Severe and rapid corrosive burns of the mouth, gullet and gastrointestinal tract will result. Effects include severe pain, difficulty in breathing, vomiting, diarrhea and collapse. Some effects may be delayed. Estimated average fatal dose is 5 grams (human, adult).

IPR-MOUSE LD50: 40 mg/kg

SKIN-RBT: 500 mg / 24 hour / severe

EYE-RBT: 50 mg/μ / 24 hour / severe

Section 12 Ecological Information

AQUATIC TOXICITY: 125 ppm / 96 hr / mosquito fish / TLm / fresh water

180 ppm / 23 hr / oysters / lethal / salt water

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information

UN/NA number: UN1823

Shipping name: Sodium hydroxide, solid

Hazard class: 8

Packing group: II

Exceptions: Ltd Qty ≤ 1 Kg.

Section 15 Regulatory Information

TSCA-listed, EINECS # (215-185-5), RSCA- listed D002

Section 16 Additional Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. * Hazardous Materials Industrial Standards.