Rooto Corporation
3505 W. Grand River Ave.
Howell, MI 48843
(517) 546-8330

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

PRODUCT NAME: Septic tank cleaner

CHEMICAL NAME: Sodium Hydroxide Mixture — CAS NO. 1310-73-2

DESCRIPTION: White solid or bead; odorless — RTECS NO. N/A

Other Designation	Manufacturer	Emergency Procedure
	Rooto Corporation 3505 W. Grand River Ave. Howell, MI 48843	24 Hour Emergency Phone: (316) 524-5751

II. PRODUCT AND COMPONENT DATA

Trade name: Caustic soda, Anhydrous, Beads and solid
Synonyms: Caustic, Beads, Bead Caustic, Soda Lye
Molecular Weight: 40.00
DOT Identification No.: UN 1823
Chemical Formula: NaOH
Component (s) Chemical Name: Sodium Hydroxide
% (Approx): 100 ACGIH TLV-TWA: 2mg/m³ Ceiling

III. PHYSICAL DATA

Specific Gravity: 2.13 gm/cc — Boiling Point: N/A
Vapor Density In Air: N/A — Vapor Pressure: N/A
% Volatile, By Volume: 0 — Evaporation Rate: 0
Solubility in Water: 100%

IV. REACTIVITY DATA

Stability: Stable Conditions to Avoid: Mixture with water, acid or incompatible materials can cause splattering and release of large amounts of heat (See Section VIII). Will react in the presence of moisture with some metals forming flammable hydrogen gas. Incompatibility: Chlorinated and fluorinated hydrocarbons (i.e. chloroform, difluoroethane), acetaldehyde, acrolein, aluminum, chlorine trifluoride, hydroquinone, maleic anhydride, phosphorous pentoxide and tetrahydrofuran.
Hazardous Decomposition Products: Will not decompose.
Hazardous Polymerization: Will not occur.

V. FIRE AND EXPLOSION DATA

Unusual Fire and Explosion Hazards: Firefighters should wear self contained positive-pressure breathing apparatus, and avoid skin contact. Refer to Reactivity Data, Section IV.

VI. TOXICITY AND FIRST AID

Exposure Limits: ACGIH: 2 mg/m³ Ceiling
OSHA: 2 mg/m³ Ceiling
Medical Conditions Aggravated by Exposure: May aggravate existing skin and/or eye conditions on contact.
ACUTE TOXICITY: Inhalation: Inhalation of dust or mist can cause mild irritation at 2 mg/m³. More severe burns and tissue damage at the upper respiratory tract, can occur at higher concentrations. Pneumonitis can result from severe exposures. Skin: major potential hazard - Bead or liquid contact with the skin can cause severe burns with deep ulcerations. Contact with dust or mist can cause multiple burns with temporary loss of hair at burn site. Solutions of up to 4% in water may not cause irritation and burning for several hours, while 25 to 50% solutions can cause these effects in less than 3 minutes. Eyes: Major

TOXICITY AND FIRST AID CON'T.

potential hazard - Beads in the eye can cause severe destruction and blindness. These effects can occur rapidly effecting all parts of the eye. Mist or dust can cause irritation with high concentrations causing destructive burns. Ingestion: Ingestion of sodium hydroxide can cause severe burning and pain in lips, mouth, tongue, throat and stomach. Severe scarring of the throat can occur after swallowing. Death can result from ingestion.
FIRST AID: Inhalation: Move person to fresh air. If breathing stops, administer artificial respiration. Get medical attention immediately. Skin: Remove contaminated clothing and immediately wash skin thoroughly for a minimum of 15 minutes with large quantities of water (preferably a safety shower). Get medical attention immediately. Eyes: Wash eyes immediately with large amounts of water preferably eyewash fountain), lifting the upper and lower eyelids occasionally. Continue washing for a minimum of 15 minutes. Get medical attention immediately. Ingestion: If person is conscious, give large quantities of water to dilute caustic. Do not induce vomiting. Get medical attention immediately. No known chronic effects. Carcinogenicity: No studies were identified relative to sodium hydroxide and carcinogenicity. Sodium hydroxide is not listed on the IARC, NTP or OSHA carcinogen lists. Reproductive Toxicity: No studies were identified relative to sodium hydroxide and reproductive toxicity.

VII. PERSONAL PROTECTION AND CONTROLS

Respiratory Protection: For levels which exceed or are likely to exceed 2 mg/m³ use a NIOSH/MSHA approved high-efficiency particulate filter with full facepiece or self-contained breathing apparatus. Follow any applicable respirator use standard or regulations. Ventilation: As necessary to maintain concentration in air below 2 mg/m³ at all times. Skin Protection: Wear neoprene, PVC, or rubber gloves; PVC rain suit; rubber boots with pant legs over boots. Eye Protection: Chemical goggles which are dust and splashproof. When mixing solutions, wear face shield or hood to protect face from splashing. Hygiene: Avoid contact with skin and avoid breathing dust. Do not eat, drink, or smoke in work area. Wash hands prior to eating, drinking, or using bathroom. Any protective clothing, or shoes which become contaminated with caustic should be removed immediately and thoroughly laundered before reuse. Other Control Measures: Safety shower and eyewash station must be located in immediate work area. To determine the exposure level(s), monitoring should be performed regularly.
NOTE: Protective equipment and clothing should be selected, used and maintained according to applicable standards and regulations. For further information, contact the clothing or equipment manufacturer or the Vulcan Chemicals Technical Service Dept.

VIII. STORAGE AND HANDLING PRECAUTIONS

Follow protective controls set forth in Section VII when handling this product. Store in closed, properly labeled containers indoors in a dry area. Do not remove or deface labels or tags.
When dissolving in water, use warm water but not exceeding 100° F. Slowly add caustic to surface of water with constant stirring to avoid violent spattering. Full protective equipment as outlined in Section VII should be worn. Large amount of heat will be evolved.
Contact of caustic soda cleaning solutions with food and beverage products in enclosed vessels or spaces may produce lethal concentrations of carbon monoxide gas. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276.
Do not reuse bags, drums or boxes without recycling or reconditioning in accordance with any applicable federal, state or local laws.

OTHER IMPORTANT INFORMATION

MEDICAL EMERGENCIES: Call collect 24 hours a day for emergency toxicological information 415/821-5338

FOR ANY OTHER INFORMATION CONTACT:
Roto Corporation
3505 W. Grand River Ave.
Howell, MI 48843
(517) 546-8330 Monday - Friday 8am - 5pm

OTHER EMERGENCY INFORMATION:
Call 316/524-5751 (24 hours)

Date of Preparation: April 1, 1990

NOTICE: Roto Corporation believes that the information contained on this material Safety Data Sheet is accurate. The suggested procedures are based on experience of the date of publication. They are not necessarily all inclusive nor fully adequate in every circumstance. Also, the suggestions should not be confused with nor followed in violation of applicable laws, regulation, rules or insurance requirements.

NO WARRANTY, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE IS MADE.

IX. SPILL, LEAK AND DISPOSAL PRACTICES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Cleanup personnel must wear proper protective equipment (refer to Section VII). Reclaim into closed containers for normal use or disposal. Remaining material may be diluted with water and neutralized. Neutralization products both liquid and solid must be recovered for disposal. Prevent runoff into ground or surface waters or sewers.
WASTE DISPOSAL METHOD:
Recovered solids or liquids may be sent to a licensed reclaimer or disposed of in a permitted waste management facility. Consult federal, state, or local disposal authorities for approved procedures.

X. TRANSPORTATION

DOT Hazard Classification: Corrosive
Placard Required: Corrosive
Label Required: Corrosive. Label as required by OSHA Hazard Communication Standard, and any applicable state and local regulators.