



<b>NFPA</b> 	<b>HCS Risk Phrases</b> <b>HCS CLASS:</b> R35 Causes severe burns.	<b>Protective Clothing</b> 
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### Section I. Chemical Product and Company Identification

Common Name/ Trade Name	<b>SODIUM HYDROXIDE</b>	Revision Date: 8-2-06
Supplier	FRITZ INDUSTRIES, INC. 500 SAM HOUSTON ROAD MESQUITE, TX 75149 (972) 285-5471 (800) 955-1323	In Case of Emergency. (800) 424-9300 Week Days: (972) 285-5471 (800) 955-1323
Chemical Family	Inorganic base	

### Section II. Composition and Information on Ingredients

Name	CAS #	% by Weight	TLV/PEL	LC <sub>50</sub> /LD <sub>50</sub>
Sodium Hydroxide	1310-73-2	99-100%	2 mg/m <sup>3</sup> Ceiling	None established

### Section III. Hazards Identification

Emergency overview	Poison! Danger! Corrosive! May be fatal if swallowed. Harmful if inhaled. Causes burns to any area of contact. Reacts with water, acids, and other materials.
Eye contact	Corrosive! Causes irritation of eyes, and with greater exposures it can cause burns that may result in permanent impairment of vision, even blindness.
Skin	Corrosive! Contact with skin can cause irritation or severe burns and scarring with greater exposures.
Inhalation	Severe irritant. Effects from inhalation of dust or mist vary from mild irritation to serious damage of the upper respiratory tract, depending on the severity of exposure. Symptoms may include sneezing, sore throat or runny nose. Severe pneumonitis may occur.
Ingestion	Corrosive! Swallowing may cause severe burns of mouth, throat, and stomach. Severe scarring of tissue and death may result. Symptoms may include bleeding, vomiting, diarrhea, fall in blood pressure. Damage may appear days after exposure.
Chronic exposure	Prolonged contact with dilute solutions or dust has a destructive effect upon tissue.
Aggravation of Pre-Existing Conditions	Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance.

### Section IV. First Aid Measures



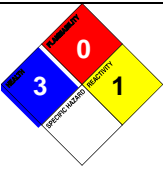
Eye Contact	Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek medical attention immediately.
Skin Contact	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Ingestion	If swallowed, do NOT induce vomiting. Give large quantities of water or milk if available. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Notes to physician	Perform endoscopy in all cases of suspected sodium hydroxide ingestion. In cases of severe esophageal corrosion, the use of therapeutic doses of steroids should be considered. General supportive measures with continual monitoring of gas exchange, acid-base balance, electrolytes, and fluid intake are also required.

### Section V. Fire and Explosion Data

General information	In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.
Fire	Not considered to be a fire hazard. Hot or molten material can react violently with water. Can react with certain metals, such as aluminum, to generate flammable hydrogen gas.
Explosion	Not considered to be an explosion hazard.

<b>Section V. Fire and Explosion Data (cont.)</b>			
Fire Fighting Media and Instructions	Use any means suitable for extinguishing surrounding fire. Adding water to caustic solution generates large amounts of heat.		
<b>Section VI. Accidental Release Measures</b>			
Leak/Spill	Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in Section 8. For spills, pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust. Do not flush caustic residues to the sewer. Residues from spills can be diluted with water, neutralized with dilute acid such as acetic, hydrochloric, or sulfuric. Absorb neutralized caustic residue on clay, vermiculite or other inert substance and package in a suitable container for disposal.		
Special Information	US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.		
<b>Section VII. Handling and Storage</b>			
Handling	Observe all warnings and precautions listed for this product. Always add the caustic to water while stirring; never the reverse.		
Storage	Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture, and incompatibles. Containers of this material may be hazardous when empty since they retain product residues (dust, solids). Do not store with magnesium or aluminum. Do not mix with acids or organic materials.		
<b>Section VIII. Exposure Controls/Personal Protection</b>			
Engineering Controls	A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.		
Personal Protection	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls (as appropriate) to prevent skin contact. Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in the work area. If the exposure limit is exceeded and engineering controls are not feasible, a half facepiece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator.		
<b>Section IX. Physical and Chemical Properties</b>			
Physical state and Appearance	Deliquescent pellets or flakes	Odor	Odorless
		Color	White
Specific Gravity	2.13	Freezing/Melting Point	318°C (604°F)
Viscosity	1.607mPa @ 25°C	Boiling Point	1390°C (2534°F)
Vapor Pressure	Negligible	Vapor Density	>1.0
pH	13-14 (0.5% solution)		
Solubility	111 g/100 g water		
<b>Section X. Stability and Reactivity Data</b>			
Chemical Stability	Stable. Very hygroscopic; can slowly pick up moisture from air and react with carbon dioxide from air to form sodium carbonate.		
Incompatibility with Various Substances	Sodium hydroxide in contact with acids and organic halogen compounds, especially trichloroethylene, may cause violent reactions. Contact with nitromethane and other similar nitro compounds causes formation of shock-sensitive salts. Contact with metals such as aluminum, magnesium, tin, and zinc cause formation of flammable hydrogen gas. Sodium hydroxide, even in fairly dilute solution, reacts readily with various sugars to produce carbon monoxide. Precautions should be taken including monitoring the tank atmosphere for carbon monoxide to ensure safety of personnel before vessel entry.		

SODIUM HYDROXIDE

<b>Section X. Stability and Reactivity Data (cont.)</b>	
Hazardous Decomposition Products	Sodium oxide. Decomposition by reaction with certain metals releases flammable and explosive hydrogen gas.
Conditions to Avoid	Moisture, dusting, and incompatibles.
<b>Section XI. Toxicological Information</b>	
Primary Routes of Exposure	Skin contact, eye contact, inhalation, ingestion
Toxic Effects on Humans	Extremely hazardous in case of eye contact. Causes severe eye burns. Extremely hazardous in case of skin contact. Skin contact produces severe burns. Extremely hazardous in case of inhalation. Extremely hazardous in case of ingestion; may be fatal if swallowed.
Special Remarks on other Toxic Effects on Humans	None
<b>Section XIII. Disposal Considerations</b>	
Disposal	Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use, or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state, and local requirements.
<b>Section XIV. Transport Information</b>	
DOT Classification	8
Proper Shipping Name	Sodium Hydroxide, Solid
DOT Identification Number	UN1823
Packing group	II
DOT (Pictograms)	
<b>Section XV. Other Regulatory Information and Pictograms</b>	
Other Classifications	WHMIS (Canada) Classification E Canadian DSL Inventory Status CAS# 1310-73-2 is listed on Canada's DSL List.
	National Fire Protection Association (U.S.A.) Health
	 Fire Hazard Reactivity Specific Hazard
<b>Section XVI. Other Information</b>	
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