



# Material Safety Data Sheet

## Section 1. Product and Company Identification

<b>Product Name</b>	Sodium Hydroxide, Pellets	<b>Product Code</b>	SX0600
<b>Manufacturer</b>	EMD Chemicals Inc. P.O. Box 70 480 Democrat Road Gibbstown, NJ 08027 Prior to January 1, 2003 EMD Chemicals Inc. was EM Industries, Inc. or EM Science, Division of EM Industries, Inc.	<b>Effective Date</b>	11/3/2005
		<b>Print Date</b>	12/15/2005

### For More Information Call

856-423-6300 Technical Service  
Monday-Friday: 8:00 AM - 5:00 PM

### In Case of Emergency Call

800-424-9300 CHEMTREC (USA)  
613-996-6666 CANUTEC (Canada)  
24 Hours/Day: 7 Days/Week

**Synonym** CAUSTIC SODA; LYE; SODIUM HYDRATE

**Material Uses** Analytical reagent.

**Chemical Family** Inorganic Base

## Section 2. Composition and Information on Ingredients

<b>Component</b>	<b>CAS #</b>	<b>% by Weight</b>
Sodium Hydroxide	1310-73-2	100

## Section 3. Hazards Identification

**Physical State and Appearance** Solid. (Flakes solid. Granular solid.)

**Emergency Overview** DANGER!  
POISON!  
CAUSES SEVERE RESPIRATORY TRACT, EYE AND SKIN BURNS.  
MAY BE FATAL IF SWALLOWED.  
HARMFUL IF INHALED.  
CAUSES DAMAGE TO THE FOLLOWING ORGANS: LUNGS, RESPIRATORY TRACT, SKIN, EYE, LENS OR CORNEA.

**Routes of Entry** Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

### Potential Acute Health Effects

**Eyes** Extremely hazardous in case of eye contact (corrosive). Causes severe eye burns.

**Skin** Extremely hazardous in case of skin contact (corrosive). Skin contact produces severe burns.  
Hazardous in case of skin contact (permeator).

**Inhalation** Extremely hazardous in case of inhalation (lung corrosive). Hazardous in case of inhalation.

**Ingestion** Extremely hazardous in case of ingestion. May be fatal if swallowed.

### Potential Chronic Health Effects

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**Carcinogenic Effects** This material is not known to cause cancer in animals or humans.

**Additional information** See Toxicological Information (section 11)

**Medical Conditions  
Aggravated by  
Overexposure:**

Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

### Section 4. First Aid Measures

<b>Eye Contact</b>	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.
<b>Skin Contact</b>	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
<b>Inhalation</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
<b>Ingestion</b>	If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

### Section 5. Fire Fighting Measures

<b>Flammability of the Product</b>	May be combustible at high temperature.
<b>Auto-ignition Temperature</b>	Not available.
<b>Flash Points</b>	Not available.
<b>Flammable Limits</b>	Not available.
<b>Products of Combustion</b>	Some metallic oxides.
<b>Fire Hazards in Presence of Various Substances</b>	Not available.
<b>Explosion Hazards in Presence of Various Substances</b>	Risks of explosion of the product in presence of static discharge: No. Risks of explosion of the product in presence of mechanical impact: No.
<b>Fire Fighting Media and Instructions</b>	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
<b>Protective Clothing (Fire)</b>	Be sure to use an approved/certified respirator or equivalent.
<b>Special Remarks on Fire Hazards</b>	Flammable hydrogen gas may be produced on prolonged contact with metals such as aluminum, tin, lead and zinc.
<b>Special Remarks on Explosion Hazards</b>	Not available.

### Section 6. Accidental Release Measures

<b>Small Spill and Leak</b>	Use appropriate tools to put the spilled solid in a convenient waste disposal container.
<b>Large Spill and Leak</b>	Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.
<b>Spill Kit Information</b>	No specific spill kit required for this product.

### Section 7. Handling and Storage

<b>Handling</b>	Do not ingest. Do not breathe dust. Do not get in eyes, on skin, or on clothing.
<b>Storage</b>	Keep container tightly closed. Keep container in a cool, well-ventilated area.

### Section 8. Exposure Controls/Personal Protection

<b>Engineering Controls</b>	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
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#### Personal Protection

**Eyes** Splash goggles.

**Body** Synthetic apron.

**Respiratory** Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

**Hands** Gloves.

**Feet** Not applicable.

#### Protective Clothing (Pictograms)



#### Personal Protection in Case of a Large Spill

Splash goggles. Full suit. Vapor and dust 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.

#### Product Name

Sodium Hydroxide

#### Exposure Limits

##### ACGIH (United States).

CEIL: 2 mg/m<sup>3</sup>

##### OSHA (United States).

CEIL: 2 mg/m<sup>3</sup>

##### AUVA (Austria, 1995).

Spitzenbegrenzung: 4 mg/m<sup>3</sup> 8 times per shift, 5 minute(s).

TWA: 2 mg/m<sup>3</sup> 8 hour(s).

##### Belgium Minister of Labour (Belgium, 1998).

CEIL: 2 mg/m<sup>3</sup>

VL: 2 mg/m<sup>3</sup> 8 hour(s).

##### BAUA (Germany, 1997).

Spitzenbegrenzung: 2 mg/m<sup>3</sup>

TWA: 2 mg/m<sup>3</sup> 8 hour(s).

##### DK-Arbejdstylsinet (Denmark, 1996).

Loftværdi: 2 mg/m<sup>3</sup>

GV: 2 mg/m<sup>3</sup> 8 hour(s).

**Tyterveyslaitos (Finland, 1998).**

TWA: 2 mg/m<sup>3</sup> 8 hour(s).

**INRS (France, 1996).**

VME: 2 mg/m<sup>3</sup> 8 hour(s).

**National Authority for Occupational Safety/Health (Ireland, 1999).**

STEL: 2 mg/m<sup>3</sup> 15 minute(s).

**Arbeidsinspectie (Netherlands, 1999).**

MAC-C: 2 mg/m<sup>3</sup>

TGG 8 uur: 2 mg/m<sup>3</sup> 8 hour(s).

**N-Arbeidstilsynet (Norway, 1996).**

AN: 2 mg/m<sup>3</sup> 8 hour(s).

**AFS (Sweden, 1996).**

KTV: 2 mg/m<sup>3</sup> 15 minute(s).

**EH40-OES (United Kingdom (UK), 1997).**

STEL: 2 mg/m<sup>3</sup> 15 minute(s).

**NIOSH REL (United States, 1994).**

CEIL: 2 mg/m<sup>3</sup>

**OSHA Final Rule (United States, 1989).**

CEIL: 2 mg/m<sup>3</sup>

### Section 9. Physical and Chemical Properties

<b>Odor</b>	Odorless.
<b>Color</b>	White.
<b>Physical State and Appearance</b>	Solid. (Flakes solid. Granular solid.)
<b>Molecular Weight</b>	40 g/mole
<b>Molecular Formula</b>	NaOH
<b>pH</b>	Not available.
<b>Boiling/Condensation Point</b>	1390.04°C (2534.1°F)
<b>Melting/Freezing Point</b>	318.38°C (605.1°F)
<b>Specific Gravity</b>	2.13 (Water = 1)
<b>Vapor Pressure</b>	Not available.
<b>Vapor Density</b>	Not available.
<b>Odor Threshold</b>	Not available.
<b>Evaporation Rate</b>	Not available.
<b>LogK<sub>ow</sub></b>	Not available.
<b>Dispersion Properties</b>	See solubility in water.
<b>Solubility</b>	Soluble in water.

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**Section 10. Stability and Reactivity**

<b>Stability and Reactivity</b>	The product is stable.
<b>Conditions of Instability</b>	Not available.
<b>Incompatibility with Various Substances</b>	Reactive with organic materials, metals, acids, moisture.
<b>Rem/Incompatibility</b>	Not available.
<b>Hazardous Decomposition Products</b>	Not available.
<b>Hazardous Polymerization</b>	Will not occur.

**Section 11. Toxicological Information**

<b>RTECS Number:</b>	Sodium Hydroxide	WB4900000
<b>Toxicity</b>	LD <sub>50</sub> : Not available. LC <sub>50</sub> : Not available.	
<b>Chronic Effects on Humans</b>	Not available.	
<b>Acute Effects on Humans</b>	Extremely hazardous in case of eye contact (corrosive). Causes severe eye burns. Extremely hazardous in case of skin contact (corrosive). Skin contact produces severe burns. Hazardous in case of skin contact (permeator). Extremely hazardous in case of inhalation (lung corrosive). Hazardous in case of inhalation. Extremely hazardous in case of ingestion. May be fatal if swallowed.	
<b>Synergetic Products (Toxicologically)</b>	Not available.	
<b>Irritancy</b>	Draize Test ( Rabbit): Skin: 500 mg/24h. Reaction: Severe. Draize Test (Rabbit) Eye: 50 ug/24h severe	
<b>Sensitization</b>	Not available.	
<b>Carcinogenic Effects</b>	This material is not known to cause cancer in animals or humans.	
<b>Toxicity to Reproductive System</b>	Not available.	
<b>Teratogenic Effects</b>	Not available.	
<b>Mutagenic Effects</b>	Tests on laboratory animals for mutagenic effects are cited in Registry of Toxic Effects of Chemical Substances (RTECS).	

**Section 12. Ecological Information**

<b>Ecotoxicity</b>	Not available.
<b>BOD5 and COD</b>	Not available.
<b>Toxicity of the Products of Biodegradation</b>	The products of degradation are less toxic than the product itself.

**Section 13. Disposal Considerations**

<b>EPA Waste Number</b>	Not available.
<b>Treatment</b>	Material does not have an EPA Waste Number and is not a listed waste, however consultation with a permitted waste disposal site (TSD) should be accomplished. Always contact a permitted waste disposal (TSD) to assure compliance with all current local, state, and Federal Regulations.

**Section 14. Transport Information**

<b>DOT Classification</b>	Proper Shipping Name: SODIUM HYDROXIDE, SOLID Hazard Class: 8 UN number: UN1823 Packing Group: II RQ: 1000 lbs. (453.6 kg)
<b>TDG Classification</b>	Not available.
<b>IMO/IMDG Classification</b>	Proper Shipping Name: SODIUM HYDROXIDE, SOLID Hazard Class: 8 UN number: UN1823 Packing Group: II RQ: 1000
<b>ICAO/IATA Classification</b>	Not available.

**+ Section 15. Regulatory Information**

<b>U.S. Federal Regulations</b>	TSCA 8(b) inventory: Sodium Hydroxide SARA 302/304/311/312 extremely hazardous substances: No products were found. SARA 302/304 emergency planning and notification: No products were found. SARA 302/304/311/312 hazardous chemicals: Sodium Hydroxide SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Sodium Hydroxide: Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard SARA 313 toxic chemical notification and release reporting: No products were found. Clean Water Act (CWA) 307: No products were found. Clean Water Act (CWA) 311: Sodium Hydroxide Clean air act (CAA) 112 accidental release prevention: No products were found. Clean air act (CAA) 112 regulated flammable substances: No products were found. Clean air act (CAA) 112 regulated toxic substances: No products were found.	
<b>WHMIS (Canada)</b>	Class D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS E: Corrosive solid.	
	CEPA DSL: Sodium Hydroxide This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all required information.	
<b>International Regulations</b>		
<b>EINECS</b>	Sodium Hydroxide	215-185-5
<b>DSCL (EEC)</b>	R35- Causes severe burns.	

**International Lists** Australia (NICNAS): Sodium Hydroxide

Japan (MITI): Sodium Hydroxide

Korea (TCCL): Sodium Hydroxide

Philippines (RA6969): Sodium Hydroxide

China: No products were found.

**State Regulations**

Pennsylvania RTK: Sodium Hydroxide: (environmental hazard, generic environmental hazard)

Massachusetts RTK: Sodium Hydroxide

New Jersey: Sodium Hydroxide

California prop. 65: No products were found.

**Section 16. Other Information**

**National Fire  
Protection  
Association  
(U.S.A.)**



Fire Hazard

Reactivity

Specific Hazard

**Changed Since Last  
Revision**

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**Notice to Reader**

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