Safety Data Sheet
According to the (US) Hazard Communication Standard (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Sodium Hydroxide, ACS	
NCL Catalog Number	**S-39B**	
Product Description	Laboratory chemical	
Manufacturer	EMD Chemicals Inc.	PO Box 70, 480 Democrat Road Gibbstown, NJ 08027
Supplier	NCL of Wisconsin, Inc. Telephone: 1-800-648-7836 Email: nclabs@nclabs.com	PO Box 8, Birnamwood, WI 54414 Fax: 715-449-2454 Emergency Contact: 1-800-424-9300 (Chemtrec)

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification

Corrosive to Metals	Category 1
Skin Corrosion	Category 1A
Serious Eye Damage	Category 1
Aquatic Acute	Category 3

Signal Word Danger

Hazard Statements

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H402	Harmful to aquatic life.

Precautionary Statements

P234	Keep only in original packaging.
P260	Do not breathe dust.
P264	Wash exposed skin thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P363	Wash contaminated clothing before reuse.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310	Immediately call a POISON CENTER or doctor.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor.
P390	Absorb spillage to prevent material-damage.
P405	Store locked up.
P406	Store in a corrosion resistant container with a resistant inner liner.
P501	Dispose of contents/container to comply with local, state and federal regulations.

Other Hazards Not Contributing to the Classification None under normal conditions.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Identity NaOH

Synonyms Caustic Soda, Lye, Sodium Hydrate

Substance

Name	CAS #	Approximate %
Sodium Hydroxide	1310-73-2	100

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General First Aid Measures Never give anything by mouth to an unconscious person. Seek medical advice if you feel unwell.

If Inhaled Remove person to fresh air and keep comfortable for breathing. Allow victim to rest. Immediately call a POISON CENTER or doctor.

In Case of Skin Contact Remove all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor.

In Case of Eye Contact Rinse carefully with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

If Swallowed Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.

Most Important Symptoms/Effects Acute and Delayed

After Inhalation Coughing, irritation of the respiratory tract, and irritation of the nasal mucous membranes.

After Skin Contact Caustic burns/corrosion of the skin.

After Eye Contact Causes serious eye irritation.

After Ingestion Nausea and vomiting. Abdominal pain. Bleeding of the gastrointestinal tract. Burns to the gastric/intestinal mucosa. Possible esophageal perforation.

Indication of Immediate Medical Attention and Special Treatment Needed

Seek medical attention if exposed.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media Foam. Dry powder. Sand. Carbon dioxide. Water spray.

Unsuitable Extinguishing Media Do not use high pressure water stream.

Special Hazards Arising from the Chemical Thermal decomposition generates corrosive vapors. Reacts with some metals to release highly flammable gases/vapors.

Special Protective Actions for Fire-Fighters Wear self-contained breathing apparatus and protective clothing. Keep exposed containers cool with water spray.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions Use personal protective equipment (see section 8). Evacuate area of non-essential personnel. Eliminate ignition sources. Ventilate area.

Environmental Precautions Prevent entry to surface and ground waters.

Methods and Materials for Containment and Cleaning Up Clean up spill with inert absorbent material. Collect spillage. Store away from other materials. Ensure compliance with local, state and federal regulations.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling Avoid contact with eyes and skin. Avoid breathing vapors. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

Conditions for Safe Storage Including any Incompatibilities Keep in a tightly closed container, stored in a cool, dry, ventilated area. Store away from sunlight, which can contribute to instability. Store away from strong acids and metals. Do not store in corrodible metal.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Sodium Hydroxide (1310-73-2)		
USA ACGIH	ACGIH Ceiling (mg/m^3)	2 mg/m^3
USA OSHA	OSHA PEL (TWA) (mg/m^3)	2 mg/m^3

Appropriate Engineering Controls Material should be handled or transferred in a fume hood or with equivalent ventilation. Maintain eye-wash fountain and quick-drench facilities in work area.

Individual Protection Measures Avoid all unnecessary exposure.

Eye/Face Protection Use chemical safety goggles and /or a full face shield where splashing is possible. Contact lenses should not be worn when working with this material.

Skin Protection Rubber or neoprene gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure to prevent skin contact.

Respiratory Protection Wear appropriate mask.

Other Information Do not eat, drink, or smoke when using this product.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Color	White
Molecular Mass	40.00 g/mol
Odor	Odorless
Odor Threshold	Not determined
pH	Not determined
Melting Point/Freezing Point	318.3 °C
Initial Boiling Point and Boiling Range	1390 °C
Flash Point	Not determined
Evaporation Rate	Not determined
Flammability (Solid, Gas)	Not determined
Upper/Lower Flammability/Explosive Limits	Not determined
Vapor Pressure	Not determined
Vapor Density	Not determined
Relative Density	2.13
Solubility	Soluble in water
Partition Coefficient: n-octanol/water	Not determined
Auto-Ignition Temperature	Not determined
Decomposition Temperature	Not determined
Viscosity	Not determined

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Contact with metals such as aluminum, tin, and zinc causes formation of flammable hydrogen gas.
Chemical Stability	Stable under ordinary conditions of use and storage.
Possibility of Hazardous Reactions	No data available.
Conditions to Avoid	Extremely high or low temperatures. Heat and sunlight can contribute to instability. Moisture.
Incompatible Materials	Aluminum, tin and zinc. Contact with acids, flammable liquids, and organic halogen compounds, especially trichloroethylene, may cause fire or explosion. Contact with nitromethane and other similar nitro compounds causes formation of shock-sensitive salts.
Hazardous Decomposition Products	When heated to decomposition, can emit toxic gases and carbon dioxide.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity Not classified

Sodium Hydroxide (1310-73-2)	
LD50 dermal rabbit	1350 mg/kg
LDLo oral rabbit	500 mg/kg

Skin Corrosion/Irritation	Causes severe skin burns.
Serious Eye Damage/Irritation	Causes serious eye damage.
Respiratory or Skin Sensitization	Not classified
Germ Cell Mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive Toxicity	Not classified
Specific Target Organ Toxicity (Single Exposure)	Not classified
Specific Target Organ Toxicity (Repeated Exposure)	Not classified
Aspiration Hazard	Not classified
Potential Adverse Human Health Effects and Symptoms	No data available
Symptoms/Injuries After Inhalation	Coughing. Irritation of the respiratory tract and the nasal mucous membranes.
Symptoms/Injuries After Skin Contact	Caustic burns/corrosion of the skin.
Symptoms/Injuries After Eye Contact	Causes serious eye damage.
Symptoms/Injuries After Ingestion	Abdominal pain. Bleeding of the gastrointestinal tract. Burns to the gastric/intestinal mucosa. Nausea and possible esophageal perforation.
Chronic Symptoms	Not available
Other Information	Not available

SECTION 12: ECOLOGICAL INFORMATION

Toxicity Harmful to aquatic life.

Sodium Hydroxide (1310-73-2)	
LC50 fish 1	45.4 mg/l (96 h; Salmo gairdneri, Oncorhynchus mykiss)
EC50 Daphnia 1	40.4 mg/l (48 h; Ceriodaphnia sp.)
LC50 fish 2	189 mg/l (48 h; Leuciscus idus)
TLM fish 1	99 mg/l (48 h; Lepomis macrochirus)
TLM fish 2	125 ppm (96 h; Gambusia affinis)

Persistence and Degradability	Not applicable
Bioaccumulative Potential	Not applicable Log Pow: -3.88 (Estimated value)

Mobility in Soil	Not applicable
Other Adverse Effects	Not applicable

SECTION 13: DISPOSAL CONSIDERATIONS

Methods of Disposal

Disposal Recommendations	Dispose of contents/containers in accordance with federal, state and local regulations.
Other Information	Avoid release to the surrounding environment.

SECTION 14: TRANSPORT INFORMATION

UN Number	1823
UN Shipping Name	Sodium Hydroxide, Solid
Transport Hazard Class(es)	8
Packing Group	II
Environmental Hazards	Harmful to aquatic life.
Transport in Bulk	Not applicable
Other Precautions	Not applicable

SECTION 15: REGULATORY INFORMATION

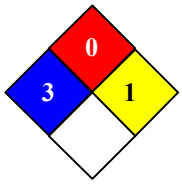
Sodium Hydroxide (1310-73-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
RQ (Reportable Quantity)	1000 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

SECTION 16: OTHER INFORMATION

Revision Date: 02/24/2015

NFPA Hazards

Health Hazard	3: Short exposure could cause serious temporary or residual injury even.
Fire Hazard	0: Materials that will not burn.
Reactivity/Instability	1: Normally stable, but can become unstable at elevated temperatures and pressures.



HMIS III Rating

Health	3: Major injury likely unless prompt action is taken and medical treatment is given.
Flammability	0: Materials that will not burn.
Physical Hazard	1: Materials that are normally stable, but can become unstable at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.
Personal Protection	H

S-39B	
Health	3
Flammability	0
Physical Hazard	1
Personal Protection	H

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END OF SAFETY DATA SHEET