



1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: CS-111

Description: Alkalinity Builder
Suggested Use: Industrial Water Treatment
Restrictions on Use: Do not mix with other industrial chemicals or incompatible

Supplier: Advanced Chemical Technology, Inc.
8728 Utica Avenue
Rancho Cucamonga, CA 91730

Telephone: 1-909-980-4556 or 1-800-632-1777
Fax: 1-909-980-9366

Emergency Phone: 1-800-255-3924 (CHEMTEL)

2. HAZARDS IDENTIFICATION

Classification

GHS Classification: Skin Corrosion (Category 1A)
Serious Eye Damage (Category 1)
Acute Toxicity, Oral (Category 4)
Acute Aquatic Toxicity (Category 3)

GHS Label Elements

Pictogram:

Signal Word: Danger

Hazard Statements: H314: Causes severe skin burns and eye damage
H302: Harmful if swallowed
H402: Harmful to aquatic life

Precautionary Statements: P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303+P361+P353: IF ON SKIN OR HAIR: Remove all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do not induce vomiting.
P313: Get medical attention.

HMIS Classification: Health Hazard: 3
Flammability: 0
Physical Hazards: 1

NFPA Rating: Health Hazard: 3
Fire: 0
Reactivity Hazard: 1

Potential Health Effects



Inhalation: May cause severe irritation or burns of the respiratory system, pulmonary edema, or lung inflammation.
Skin: Extremely corrosive. Causes serious burns to the skin.
Eyes: Extremely corrosive. Damage can range from severe irritation and mild scarring to blistering, disintegration, ulceration, severe scarring and clouding. Severe cases may lead to permanent blindness.
Ingestion: Severe pain: burning of the mouth, throat and esophagus, vomiting, diarrhea, collapse and death may result.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS Number</u>	<u>Concentration</u>
Sodium Hydroxide	1310-73-2	50%

Synonyms:

4. FIRST AID MEASURES

If Inhaled: If not breathing, give artificial respiration. Consult a Physician.
Skin Contact: Immediately remove contaminated clothing and shoes, wash before reuse. Flush all affected areas with large amounts of water for at least 15 minutes.
Eye Contact: Immediately flush the eyes with large quantities of running water for a minimum of 15 minutes. Obtain medical attention immediately.
If Ingested: Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting. Give large quantities of water. If vomiting occurs spontaneously, keep airway clear and give more water. Consult a physician immediately.

5. FIREFIGHTING MEASURES

Flammability Overview: Keep containers cool with water spray. Firefighters should wear self-contained breathing apparatus and chemical resistant clothing. (e.g. chemical splash suit) Fight fire from safe distance or protected location. At high temperature, fuming may occur giving off a strong corrosive gas. Sodium hydroxide can react with metals, such as aluminum, tin, and zinc to form flammable hydrogen gas.

Flash Point: Not Applicable

Extinguishing Media: Use extinguishing media suitable for the surrounding fire. If water is used, care should be taken since it can generate heat and cause spattering if applied directly to sodium hydroxide.

Special Protective Equipment for Firefighters: Wear a self-contained breathing apparatus (SCBA) for firefighting if necessary.

Hazardous Combustion Products: Thermal decomposition: Sodium Oxide.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protective equipment. Wear goggles, rubber boots and gloves.
Environmental Precautions: Prevent from entering drains and waterways. Discharge into the environment



must be avoided.

Containment and Clean Up: Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. If assistance is needed call CHEMTEL or emergency services.

7. HANDLING AND STORAGE

Safe Handling: Use personal protective equipment. Avoid breathing vapors, mist, or gas. Always ensure adequate ventilation. Never add water.

Safe Storage: Keep containers tightly closed in a dry well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store away from incompatible materials. Avoid freezing. Do not expose sealed containers to temperatures above 104 F. Store away from incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

Component	CAS Number	Exposure Limit	Basis
Sodium Hydroxide	1310-73-2	2 mg/m ³	ACGIH Threshold Value (TLV)
		2 mg/m ³	OSHA Table Z-1: Limits for Air Contaminants
		Not Established	NIOSH Recommended Exposure Limits

Personal Protective Equipment

Eye Protection: Wear tightly fitting safety goggles or safety glasses with a full-face shield. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH. Have eye-wash stations available where eye contact can occur.

Hand Protection: Handle with chemical-resistant gloves. Gloves must be inspected prior to use. Dispose of contaminated gloves. Wash and dry hands after use.

Skin Protection: Wear complete suit protection against chemicals, including chemical-resistant boots. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Safety showers should be located in the work area where skin contact can occur.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate, use a NIOSH-approved full-face respirator with appropriate cartridges. For high concentrations, unknown concentrations, and for oxygen deficient atmospheres, use a NIOSH approved air-supplied respirator. Respiratory protection may be needed for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA 29 CFR 1910.134.

General Controls: Always ensure adequate ventilation and that working areas contain safety showers and eye wash stations. Handle material in accordance with good industrial hygiene and safety practices.

9. PHYSICAL AND CHEMICAL PROPERTIES



Physical State:	Liquid
Color:	Colorless, slightly turbid liquid
Odor:	None
Odor Threshold:	Not Applicable
pH:	14.0 (aqueous solution 5%)
Melting/Freezing Point:	54 °F
Boiling Point:	284 °F
Flash Point:	Not Established
Evaporation Rate:	Not Established
Flammability (solid, gas):	Not Established
Flammability/Explosion Limits:	Not Established
Vapor Pressure @ 20°C:	1.5 mm Hg @ 68 F
Vapor Density:	> 1 (air=1)
Specific Gravity:	1.53
Density:	Not Applicable
Solubility in Water:	Complete
Partition Coefficient:	Not Established
Autoignition Temperature:	Not Established
Decomposition Temperature:	Not Established
Viscosity:	78.3 cps @ 68 F

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under recommended use and storage conditions.
Conditions and Materials to Avoid:	Sodium hydroxide reacts violently or explosively with many organic and inorganic chemicals, such as strong acids, nitroaromatic, nitroparaffin, and organohalogen compounds, glycols, and organic peroxides. Reacts violently with water. Do not mix with other industrial chemicals or incompatibles.
Hazardous Decomposition Products:	Thermal decomposition; Sodium oxide

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	CAS Number	Test	Toxicity
Sodium Hydroxide	1310-73-2	Oral LD50 (Rabbit)	Oral LD50 (rabbit) 500mg/kg
		Dermal LD50	Not Established
		Inhalation LD50 (Rat)	Not Established

Potential Health Effects

Inhalation:	May cause severe irritation or burns of the respiratory system, pulmonary edema, or lung inflammation.
Skin:	Extremely corrosive. Causes serious burns to the skin.
Eyes:	Extremely corrosive. Damage can range from severe irritation and mild scarring to blistering, disintegration, ulceration, severe scarring and clouding. Severe cases may lead to permanent blindness.
Ingestion:	Severe pain: burning of the mouth, throat and esophagus, vomiting, diarrhea, collapse and death may result.



Signs and Symptoms of Exposure: Skin: repeated or prolonged skin contact would be expected to cause drying, cracking, and inflammation of the skin (dermatitis).

Chronic Effects of Long-term Exposure: Asthma, bronchitis, emphysema, and other lung diseases and chronic nose, sinus or throat conditions. Skin irritation may be aggravated in individuals with existing skin disorders.

Carcinogenicity: No component of this product at levels greater than 0.1% is identified as carcinogenic by IARC, ACGIH, or OSHA.

12. ECOLOGICAL INFORMATION

Acute Ecotoxicity

Component	CAS Number	Organism	Ecotoxicity
Sodium Hydroxide	1310-73-2	Not Established	Not Established

Ecological Effects

Persistence and Degradability: Degrades readily by reacting with natural carbon dioxide in the air.

Bioaccumulation Potential: Not expected to bio-accumulate

Mobility in Soil: Not Established

Other Adverse Effects: Harmful to aquatic life. The damaging effects are mostly the consequence of the increase in pH of the water.

13. DISPOSAL CONSIDERATIONS

Disposal: Surplus and non-recyclable material should be treated as hazardous waste and be disposed of by a licensed disposal company. Material should be disposed in accordance with all local, state, and federal regulations. Regulations vary by region. Do not release into sewers or waterways.

Contaminated Packaging: Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT Information

Proper Shipping Name: Corrosive Liquid, basic, inorganic
UN Number: 3266
Hazard Class: 8
Packing Group: II

Reportable Quantity (RQ): This product contains 50% sodium hydroxide, which if released to the environment in quantities of 1000 lbs. or greater, 100 % basis, notification must be made to the National Response Center in Washington D.C. at 1-800-424-8802

Marine Pollutant: Not Established

Note: Regulated for both bulk and non-bulk.



15. REGULATORY INFORMATION

US Federal

SARA 302 Components: This product does not contain a Section 302 substance subject to Emergency Planning Notification/Threshold Planning Quantities.
SARA 311/312 Hazards: Immediate (Acute) Health Hazard
SARA 313 Components: None Listed

TSCA Inventory: All chemical components are listed on TSCA inventory.

European Union

EC Inventory: Not Established

State Regulations

CA Prop 65: This product does not contain chemicals currently on the California list of known carcinogens and/or reproductive toxins.

16. OTHER INFORMATION

SDS Version: 1.0
Revision Date: 06/01/2015
Disclaimer: The information contained in this document was carefully compiled and is believed to be accurate. The information represents the present state of our knowledge and is applicable to the product with the regard to appropriate safety precautions. However, it does not represent any guarantee of the properties of the product. Advanced Chemical Technology, Inc. shall not be held liable for any damages resulting from handling or from contact with the above product. It is the responsibility of the purchaser to determine the suitability of the product for their particular purposes. Nothing contained herein shall be construed to be a recommendation to use, or as a license to operate under, or to infringe any existing patents. For product information call Advanced Chemical Technology, Inc., 1-909-980-4556.