



1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: BT-316

Description: Boiler Water Treatment
Suggested Use: Water Industrial Treatment
Restrictions on Use: Do not mix with other industrial chemicals.

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: 1
Flammability: 0
Physical Hazards: 0

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

Potential Health Effects



Inhalation: Mists are irritating to the nose, throat, and mucous membranes.
Skin: Causes skin irritation. A single prolonged exposure is unlikely to result in harmful quantities being absorbed.
Eyes: Liquids and mists can severely irritate or damage the eyes and cause corneal burns.
Ingestion: This material is irritating to the mouth and esophagus.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS Number</u>	<u>Concentration</u>
Potassium hydroxide	1310-58-3	< 8 %
Hydroxyethylidene diphosphonic acid	2809-21-4	< 10 %
Sodium sulfite	7757-83-7	< 10 %

Synonyms:

4. FIRST AID MEASURES

If Inhaled: If not breathing, give artificial respiration. Consult a Physician.
Skin Contact: Immediately remove clothing under a safety shower. Flush all affected areas with large amounts of water for at least 15 minutes. Wash clothes and shoes before reuse.
Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes and consult a physician.
If Ingested: Never give anything by mouth to an unconscious person. Rinse mouth with water. Do NOT induce vomiting (if available, give several glasses of milk). Consult a physician.

5. FIREFIGHTING MEASURES

Flammability Overview: Considered a non-flammable water solution
Flash Point: Not Applicable
Extinguishing Media: Water-spray, foam, carbon dioxide or dry chemical for fires in storage areas.
Special Protective Equipment for Firefighters: Wear a self-contained breathing apparatus (SCBA) for firefighting if necessary.
Hazardous Combustion Products: Not Applicable

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.

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

Component	CAS Number	Exposure Limit	Basis
Potassium hydroxide	1310-58-3	2 mg/m ³	ACGIH Threshold Value (TLV)
		2 mg/M3	OSHA Table Z-1: Limits for Air Contaminants
		Not Established	NIOSH Recommended Exposure Limits
Hydroxyethylidene diphosphonic acid	2809-21-4	Not Established	ACGIH Threshold Value (TLV)
		Not Established	OSHA Table Z-1: Limits for Air Contaminants
		Not Established	NIOSH Recommended Exposure Limits
Sodium Sulfite	7757-83-7	Not Established	ACGIH Threshold Value (TLV)
		Not Established	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: Dark amber



Odor:	Bland
Odor Threshold:	Not Established
pH:	>12.5
Melting/Freezing Point:	Not Established
Boiling Point:	212 °F
Flash Point:	Not Established
Evaporation Rate:	1
Flammability (solid, gas):	Not Established
Flammability/Explosion Limits:	Not Established
Vapor Pressure @ 20°C:	23.75 mmHg
Vapor Density:	0.62@ 68 °F
Specific Gravity:	1.126
Density:	Not Established
Solubility in Water:	Soluble
Partition Coefficient:	Not Established
Autoignition Temperature:	Not Established
Decomposition Temperature:	Not Established
Viscosity:	Not Established

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under recommended use and storage conditions.
Conditions and Materials to Avoid:	Do not mix with other industrial chemicals. Compatible with most boiler water treatment compounds at use dosages.
Hazardous Decomposition Products:	Carbon monoxide, carbon dioxide, ammonia and oxides of nitrogen

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	CAS Number	Test	Toxicity
Potassium hydroxide	1310-58-3	Oral LD50 (Rat)	Not Established
		Dermal LD50	Not Established
		Inhalation LD50 (Rat)	Not Established
Hydroxyethylidene diphosphonic acid	2809-21-4	Oral LD50 (Rat)	Not Established
		Dermal LD50	Not Established
		Inhalation LD50 (Rat)	Not Established
Sodium Sulfite	7757-83-7	Oral LD50 (Rat)	Not Established
		Dermal LD50	Not Established
		Inhalation LD50 (Rat)	Not Established

Potential Health Effects

Inhalation:	Mist is irritating to the nose, throat and mucous membranes.
Skin:	Causes skin irritation. A single prolonged exposure is unlikely to result in harmful quantities being absorbed.
Eyes:	Liquids and mists can severely irritate or damage the eyes and cause corneal burns.
Ingestion:	This material is irritating to the mouth and the throat.



Signs and Symptoms of Exposure: Prolonged contact may cause severe burns.

Chronic Effects of Long-term Exposure: Persons with pre-existing skin disorders, eye problems, or impaired respiratory functions may be more susceptible to the effects of this substance.

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
Potassium hydroxide	1310-58-3	Not Established	Not Established
Hydroxyethylidene diphosphonic acid	2809-21-4	Not Established	Not Established
Sodium sulfite	7757-83-7	Not Established	Not Established

Ecological Effects

Persistence and Degradability: All components will degrade in 60 days in the presence of sunlight and oxygen.

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, n.o.s. (Sodium hydroxide)

UN Number: 1760

Hazard Class: 8

Packing Group: II

Reportable Quantity (RQ): Potassium Hydroxide: 1000 lbs.

Marine Pollutant:

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: Acute Health Hazard
SARA 313 Components: This product does not contain a Section 313 listed toxic chemical subject to release reporting requirements.

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

European Union

EC Inventory: None Listed

State Regulations

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

16. OTHER INFORMATION

SDS Version: 1.1
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.