



1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: BT-251

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

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

Telephone: 1-909-980-4556 or 1-800-527-9607
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: 2
Flammability: 1
Physical Hazards: 0

NFPA Rating: Health Hazard: 2
Fire: 1
Reactivity Hazard: 0



Potential Health Effects

Inhalation: Mists and vapors are corrosive to the nose, throat, and mucous membranes.
Skin: Causes skin irritation. May cause a more serious response if confined to the skin or if skin is abraded. A single prolonged exposure is unlikely to result in harmful quantities being absorbed.
Eyes: Vapors will irritate the eyes. Liquids and mists can severely irritate or damage the eyes and cause corneal burns.
Ingestion: This material is corrosive to the mouth and throat.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS Number</u>	<u>Concentration</u>
Sodium hydroxide	1310-73-2	< 6%
Diethylaminoethanol	100-37-8	< 5%
Sodium Sulfite	7757-83-7	< 10%
Hydroxyethylidene diphosphonic acid, sodium salt	3794-83-0	< 5%

Synonyms:

4. FIRST AID MEASURES

If Inhaled: If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Skin Contact: Take off contaminated clothing and shoes immediately. Flush skin with plenty of water for at least fifteen minutes. Consult a physician.
Eye Contact: Flush eyes with plenty of water for at least 15 minutes and consult a physician. Remove contact lenses if able to do so. Continue rinsing eyes during transport to hospital.
If Ingested: Do NOT induce vomiting unless instructed to do so by a physician. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Flammability Overview: Dried residue can thermally decompose, giving off irritating and potentially toxic fumes.
Flash Point: > 200 °F
Extinguishing Media: Use water-spray, alcohol-resistant foam, dry chemical, or carbon dioxide. Tailor extinguishing media to surrounding fire.
Special Protective Equipment for Firefighters: Wear a self-contained breathing apparatus (SCBA) for firefighting if necessary.
Hazardous Combustion Products: Carbon monoxide, carbon dioxide and sulfur dioxide.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protective equipment. Avoid breathing vapors, mist, or gas.



Always ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. 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/m ³	OSHA Table Z-1: Limits for Air Contaminants
Diethylaminoethanol	100-37-8	10 ppm TWA	ACGIH Threshold Value (TLV)
		2 ppm	OSHA Table Z-1: Limits for Air Contaminants
Sodium Sulfite	7757-83-7	5 mg/m ³	ACGIH Threshold Value (TLV)
		5 mg/m ³	OSHA TWA (Total Dust)
Hydroxyethylidene diphosphonic acid, sodium salt	3794-83-0	Not Established	ACGIH Threshold Value (TLV)
		Not Established	OSHA TWA (Total Dust)

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: Ammoniacal
Odor Threshold: Not Established
pH: >12.5
Melting/Freezing Point: Not Established
Boiling Point: > 212°F
Flash Point: > 200°F
Evaporation Rate: < 1
Flammability (solid, gas): Not Established
Flammability/Explosion Limits: Not Established
Vapor Pressure @ 20°C: Not Established
Vapor Density: Not Established
Specific Gravity: 1.162 g/mL
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 storage conditions.
Conditions and Materials to Avoid: Compatible with most boiler water treatment compounds at use dosages. Do not mix with other industrial chemicals.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide and sulfur dioxide.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	CAS Number	Test	Toxicity
Potassium Hydroxide	1310-58-3	Oral LD50 (Rat)	Not Established
		Skin (std Draize)	Not Established
		Inhalation LC50	Not Established
Diethylaminoethanol	1310-73-2	Oral LD50 (Rat)	Not Established
		Skin (Rabbit)	Not Established
		Inhalation LC50 (Rat)	Not Established
Sodium Sulfite	7757-83-7	Oral LD50 (Rat)	Not Established



		Skin	Not Established
		Inhalation LC50 (Rat)	Not Established
Hydroxyethylidene diphosphonic acid, sodium salt	3794-83-0	Oral LD50 (Rat)	Not Established
		Skin	Not Established
		Inhalation LC50 (Rat)	Not Established

Potential Health Effects

Inhalation: Mists and vapors are corrosive to the nose, throat, and mucous membranes.
 Skin: Causes skin irritation. May cause a more serious response if confined to the skin or if skin is abraded. A single prolonged exposure is unlikely to result in harmful quantities being absorbed.
 Eyes: Vapors will irritate the eyes. Liquids and mists can severely irritate or damage the eyes and cause corneal burns.
 Ingestion: This material is corrosive to the mouth and throat.
 Signs and Symptoms of Exposure: Not Established
 Chronic Effects of Long-term Exposure: Not Established
 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
Diethylaminoethanol	100-37-8	Not Established	Not Established
Sodium Sulfite	7757-83-7	Not Established	Not Established
Hydroxyethylidene diphosphonic acid, sodium salt	3794-83-0	Not Established	Not Established

Ecological Effects

Persistence and Degradability: Not Established
 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: 1000lbs

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: 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 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



Advanced Chemical Technology, Inc.

BT-251

SAFETY DATA SHEET

Version 1.0

Effective Date: 06/01/2015

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.