

Product BT-4110
 Revision Date 06/05/15
 Revision 1



Safety Data Sheet

SECTION 1: IDENTIFICATION

Product Name	BT-4110
Identifier Uses	Boiler Treatment
Supplier	Clear Water Technologies, LLC 13560 Colombar Court Fontana, California 92337 Tel: 844.429.8324
Contact Person	info@clearwatertech.com
Emergency Telephone	24-HOUR EMERGENCY TELEPHONE: INFOTRAC: 1-800-535-5053 INTERNATIONAL#: 1-352-323-3500

SECTION 2: HAZARDS IDENTIFICATION

Appearance	Clear, dark amber liquid.
Color	Clear, dark amber liquid.
Odor	Slight Musty.
Pictogram(s)	
Signal Word	Danger
Hazard Statements	H314 Causes severe skin burns and eye damage
Precautionary Statements	P280 Wear protective gloves/ protective clothing/eye protection/face protection. P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately 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. P310 Immediately call a POISON CENTER or doctor/physician
Contains	sodium hydroxide
GHS Classification	
Physical and Chemical Hazards	Not classified
Human Health	Skin Corr. 1A - H314
Environment	Not classified
OSHA Regulatory Status	This product is Hazardous under the OSHA Hazard communication Standard.
Inhalation	Inhalation of vapors or fumes may cause moderate to severe irritation to mucous membranes and respiratory tract. Avoid contact.
Ingestion	Exposure to liquid product may cause moderate to severe irritation to inner linings of mouth, esophagus and gastrointestinal tract, and possible burns. Do NOT ingest.
Skin contact	Exposure to liquid product may cause moderate to severe irritation to skin, and possible burns. Symptoms of exposure may include redness, itching, swelling or pain. Effects of contact are typically an irritant dermatitis. Avoid contact.
Eye contact	Exposure to liquid product may cause severe irritation to eyes, and possibly burns or eye damage. Symptoms of exposure may include redness, itching, swelling, tearing or pain. Effects of contact may be delayed. Avoid contact.
Routes of Exposure	No Information available.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Composition Comments	Confidential business information has been removed without affecting the overall safety information on the safety data sheet.
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SECTION 4: FIRST AID MEASURESDescription of first aid measures

General Information	General first aid, rest, warmth and fresh air.
Inhalation	If this product is inhaled and symptoms occur, move the exposed person to fresh air promptly. Seek medical attention if symptoms persist.
Ingestion	If this product is ingested, drink small amounts of water and seek medical attention promptly. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
Skin contact	If this product contacts the skin, immediately flush the affected area with soap and water for at least fifteen (15) minutes. If the product penetrates the clothing, promptly remove the contaminated clothing or shoes, and flush the affected area as described. Seek medical attention if irritation persists.
Eye contact	If this product contacts the eyes, immediately flush eyes with plenty of clean running water for at least fifteen (15) minutes, lifting the upper and lower eyelids occasionally. Remove contact lenses if worn. Seek medical attention if irritation persists.

Most important symptoms and effects, both acute and delayed

General Information	No information available
Inhalation	Inhalation of vapors or fumes may cause moderate to severe irritation to mucous membranes and respiratory tract. Avoid contact.
Ingestion	Exposure to liquid product may cause moderate to severe irritation to inner linings of mouth, esophagus and gastrointestinal tract, and possible burns. Do NOT ingest.
Skin contact	Exposure to liquid product may cause moderate to severe irritation to skin, and possible burns. Symptoms of exposure may include redness, itching, swelling or pain. Effects of contact are typically an irritant dermatitis. Avoid contact.
Eye contact	Exposure to liquid product may cause severe irritation to eyes, and possibly burns or eye damage. Symptoms of exposure may include redness, itching, swelling, tearing or pain. Effects of contact may be delayed. Avoid contact.
Routes of Exposure	No Information available.

Most important symptoms and effects, both acute and delayed

Notes To The Physician	This product is irritating to eyes, skin and mucous membranes. This product has low oral toxicity. Treat exposure symptomatically.
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SECTION 5: FIREFIGHTING MEASURES

Auto Ignition Temperature (°C)	No Information available.
Flammability Limit-Lower (%)	No Information available.
Flammability Limit-Upper (%)	No Information available.
Flashpoint	No Information available.
Extinguishing Media	Use water, foam, dry chemical or carbon dioxide to extinguish fire.
Hazardous combustion products	Unknown.
Unusual Fire & Explosion Hazards	Acid will react with active metals to produce flammable hydrogen.
Special Fire Fighting Procedures	Use water to cool containers exposed to a fire.
Protective equipment for fire-fighters	Fire fighters should wear full protective equipment, and have self-contained breathing apparatus available.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use proper personal protection (refer to Section 8).
Environmental Precautions	Run off from fire control or dilution water may cause pollution. Keep out of drains, municipal sewers, open bodies of water and water course.
Spill Clean Up Methods	Safely stop source of spill. Clean up spills immediately. Restrict non-essential personnel from the area. Wear protective clothing, goggles and respirator if ventilation is not adequate. Dike spill area and soak up material with sand or other absorbent. Place into chemical waste

container for disposal according to local, state or federal regulations at an approved chemical waste reprocessing facility. Neutralize the residue with lime or soda ash and flush spill area with large amounts of water.

SECTION 7: HANDLING AND STORAGE

Handling	Use proper personal protection when handling (refer to Section 8). Use under well-ventilated conditions. Avoid contact with eyes, skin and clothing. Avoid breathing vapors and mists. Avoid prolonged or repeated contact. Do NOT ingest. Wash thoroughly after handling. Rinse container before disposal. Do NOT reuse containers for other purposes.
Usage Description	Use only according to directions.
Storage Precautions	The recommended shelf life is two (2) years. It is recommended that products be retested if stored for more than two (2) years. Under ideal storage conditions, the shelf life is almost indefinite.
Specific End Use(s)	The identified uses are in section 1 of this Safety Data Sheet.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Protective Equipment



Component	STD	TWA (8 Hrs)	STEL (15mins)	Notes
sodium hydroxide	OSHA		2mg/m3	

Ingredient Comments

OSHA

Process Conditions Engineering Measures Respiratory Equipment

Provide eyewash, quick drench.
General mechanical ventilation is recommended for enclosed areas.
Use of respirator protection is not generally required. However, if exposure is above the stated limits or ventilation is inadequate, use a NIOSH approved acid gas/organic vapor respirator to reduce potential for inhalation exposure. When using respirator cartridges, they must be changed frequently to assure breakthrough exposure does not occur.

Hand Protection Eye Protection

Use rubber or plastic gloves to minimize skin contact.
To avoid contact with eyes, use safety glasses or chemical splash goggles and face shield.
Eye wash station should be available in the work area.

Hygiene Measures

DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Appearance	Clear, dark amber liquid.
Color	Clear, dark amber liquid.
Odor	Slight Musty.
Odor Threshold -Lower	No Information available.
Odor Threshold - Upper	No Information available.
pH-Value, Conc. Solution	13.5
Melting point	32.0 °F
Initial boiling point and boiling	212.0 °F

range

Flashpoint	No Information available.
Evaporation rate	No Information available.
Flammability State	No Information available.
Flammability Limit-Lower (%)	No Information available.
Flammability Limit-Upper (%)	No Information available.
Vapor pressure	23.8 mm Hg 0.0
Vapor Density (air=1)	No Information available.
Relative density	1.107 @ 68.0 °F
Bulk Density	No Information available.
Solubility	Completely soluble in water.
Decomposition temperature	No Information available.
Partition coefficient; n-octanol/water	No Information available.
Auto Ignition Temperature (°C)	No Information available.
Viscosity	No Information available.
Explosive Properties	No information available.
Oxidizing Properties	No Information available.
Molecular Weight	No Information available.
Volatile Organic Compound	No Information available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Reactions may occur with strong oxidizing agents, strong caustic materials and metals.
Stability	This product is very stable at high temperature.
Hazardous Polymerization	Hazardous polymerization is not expected to occur under normal temperatures and pressures..
Hazardous Decomposition Products	Hydrogen and hydrogen chloride.
Conditions to Avoid	Avoid contact with strong oxidizing agents, strong caustic materials and metals.
Materials to Avoid	Keep away from strong oxidizing agents, strong caustic materials and metals.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicological Information	No toxicological information for the overall finished product.
Acute Toxicity (Oral LD50)	>5414.00mg/kg Rat
Acute Toxicity (Dermal LD50)	>8663.00mg/kg Rabbit
Acute Toxicity (Inhalation LC50)	No Information available.
Skin Corrosion/Irritation	No Information available.
Respiratory Sensitization	No Information available.
Skin Sensitization	No Information available.
Reproductive Toxicity:	No Information available.
Germ Cell Mutagenicity:	No Information available.

Genotoxicity - In Vitro
Genotoxicity - In Vivo**Carcinogenicity:****Carcinogenicity**

No Information available.

NTP - Carcinogenicity

The product and its components are not listed.

OSHA - Carcinogenicity

The product and its components are not listed.

IARC Carcinogenicity

The product and its components are not listed.

Specific Target Organ Toxicity - Single Exposure:**STOT - Single Exposure**

No Information available.

Specific Target Organ Toxicity - Repeated Exposure:**STOT - Repeated Exposure**

No Information available.

Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
sodium hydroxide		1350mg/kg Rabbit	
sodium chloride	3g/kg Rat	10g/kg Rabbit	42g/m3 Rat 1 Hours

SECTION 12: ECOLOGICAL INFORMATION**Ecotoxicity**

No Information available.

Acute Toxicity - Fish

LC50 96 Hours >11167.00ppm Onchorhynchus mykiss (Rainbow Trout)

Acute Toxicity -

LC50 48 Hours >1197.00ppm Daphnia magna

Aquatic Invertebrates**Acute Toxicity - Aquatic Plants**

No Information available.

Degradability

No information available.

Bioaccumulative Potential

No data available on bioaccumulation.

Mobility

Completely soluble in water.

Results of PBT and vPvB Assessment

The product does not contain any PBT or vPvB substances.

Other Adverse Effects

None known.

Name	Acute Toxicity (Fish)	Acute Toxicity (Aquatic)	Acute Toxicity (Aquatic Plants)
sodium hydroxide		EC50 100.00ppm Daphnia magna	

SECTION 13: DISPOSAL CONSIDERATIONS**Waste Management**

When handling waste, consideration should be made to the safety precautions applying to handling of the product.

Disposal Methods

Do NOT dump into any sewers, on the ground or into any body of water. Rinse containers before disposal. Since emptied containers contain product residue, follow label warnings even after container is emptied. Dispose in accordance with all applicable federal, state and local laws and regulations.

SECTION 14: TRANSPORT INFORMATION**UN No. (DOT/TDG)**

3266 - CORROSIVE LIQUID, BASIC, INORGANIC, (Sodium Hydroxide)

UN No. (IMDG)

3266 - CORROSIVE LIQUID, BASIC, INORGANIC, (Sodium Hydroxide)

UN No. (ICAO)


3266 - Corrosive liquid, basic, inorganic (Sodium Hydroxide)

DOT Proper Shipping Name

3266 - CORROSIVE LIQUID, BASIC, INORGANIC, (Sodium Hydroxide)

TDG Proper Shipping Name

3266 - CORROSIVE LIQUID, BASIC, INORGANIC, (Sodium Hydroxide)

DOT Hazard Class	8
DOT Hazard Label	Class 8 - Corrosive
TDG Class	8
TDG Label(s)	8
IMDG Class	8
ICAO Class	8
Transport Labels	
DOT Pack Group	II
IMDG Pack Group	II
Air Pack Group	II
EMS	F-A, S-B
Environmentally Hazardous Substance/Marine Pollutant	No

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

The Following ingredients are listed None Listed.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

The Following ingredients are listed sodium hydroxide

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

The Following ingredients are listed None Listed.

SARA 313 Emission Reporting

The Following ingredients are listed None Listed.

CAA Accidental Release Prevention

The Following ingredients are listed None Listed.

OSHA Highly Hazardous Chemicals

The Following ingredients are listed None Listed.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

The Following ingredients are listed None Listed.

California Air Toxics "Hot Spots" (A-I)

The Following ingredients are listed sodium hydroxide

California Air Toxics "Hot Spots" (A-II)

The Following ingredients are listed None Listed.

Massachusetts "Right To Know" List

The Following ingredients are listed sodium hydroxide

Rhode Island "Right To Know" List

The Following ingredients are listed sodium hydroxide

Minnesota "Right To Know" List

The Following ingredients are listed sodium hydroxide

New Jersey "Right To Know" List

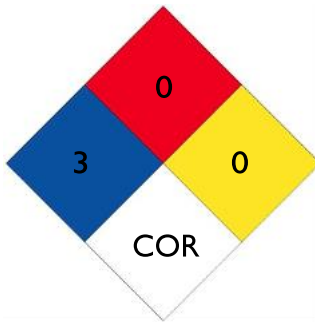
The Following ingredients are listed sodium hydroxide

Pennsylvania "Right To Know" List

The Following ingredients are listed sodium hydroxide

SECTION 16: OTHER INFORMATION

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)



HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)

Health	3
Flammability	0
Physical Hazard	0
Personal Protection	D

Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.