

Product BT-4100M  
 Revision Date 06/11/2015  
 Revision 2




## Safety Data Sheet

### SECTION 1: IDENTIFICATION

<b>Product Name</b>	BT-4100M
<b>Identifier Uses</b>	Boiler Treatment
<b>Supplier</b>	Clear Water Technologies, LLC 13560 Colombard Court Fontana, California 92337 Tel: 844.429.8234
<b>Contact Person</b>	info@clearwatertech.com
<b>Emergency Telephone</b>	24-HOUR EMERGENCY TELEPHONE: INFOTRAC: 1-800-535-5053 INTERNATIONAL#: 1-352-323-3500

### SECTION 2: HAZARDS IDENTIFICATION

<b>Appearance</b>	Liquid.
<b>Color</b>	Clear, dark amber liquid.
<b>Odor</b>	Bland odor
<b>Pictogram(s)</b>	
<b>Signal Word</b>	Danger
<b>Hazard Statements</b>	H314 Causes severe skin burns and eye damage
<b>Precautionary Statements</b>	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): 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
<b>Contains</b>	sodium hydroxide phosphonic acid
<b>GHS Classification</b>	
<b>Physical and Chemical Hazards</b>	Not classified
<b>Human Health</b>	Skin Corr. 1A - H314
<b>Environment</b>	Not classified
<b>OSHA Regulatory Status</b>	This product is Hazardous under the OSHA Hazard communication Standard.
<b>Inhalation</b>	There may be shortness of breath with a burning sensation in the throat.
<b>Ingestion</b>	Do not ingest. Exposure to liquid product may cause moderate to severe irritation to inner linings of mouth, esophagus and gastrointestinal tract, and possible burns.
<b>Skin contact</b>	Corrosive! Can cause redness, pain, and severe skin burns.
<b>Eye contact</b>	Extreme irritation of eyes and mucous membranes, including burning and tearing. Causes serious eye damage.
<b>Routes of Exposure</b>	Unknown

**SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS**

<b>Composition Comments</b>	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 MEASURES**Description of first aid measures

<b>General Information</b>	General first aid, rest, warmth and fresh air.
<b>Inhalation</b>	Remove victim immediately from source of exposure. Keep the affected person warm and at rest. Get prompt medical attention.
<b>Ingestion</b>	NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Rinse mouth thoroughly. Get medical attention immediately!
<b>Skin contact</b>	Remove affected person from source of contamination. Remove contaminated clothing. Wash the skin immediately with soap and water. Get medical attention promptly if symptoms occur after washing.
<b>Eye contact</b>	Do not rub eye. Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Get medical attention immediately. Continue to rinse. Continue to rinse for at least 15 minutes.

Most important symptoms and effects, both acute and delayed

<b>General Information</b>	The severity of the symptoms described will vary dependent of the concentration and the length of exposure.
<b>Inhalation</b>	There may be shortness of breath with a burning sensation in the throat.
<b>Ingestion</b>	Do not ingest. Exposure to liquid product may cause moderate to severe irritation to inner linings of mouth, esophagus and gastrointestinal tract, and possible burns.
<b>Skin contact</b>	Corrosive! Can cause redness, pain, and severe skin burns.
<b>Eye contact</b>	Extreme irritation of eyes and mucous membranes, including burning and tearing. Causes serious eye damage.
<b>Routes of Exposure</b>	Unknown

Most important symptoms and effects, both acute and delayed

<b>Notes To The Physician</b>	Treat Symptomatically.
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**SECTION 5: FIREFIGHTING MEASURES**

<b>Auto Ignition Temperature (°C)</b>	No Information available.
<b>Flammability Limit-Lower (%)</b>	No Information available.
<b>Flammability Limit-Upper (%)</b>	No Information available.
<b>Flashpoint</b>	No Information available.
<b>Extinguishing Media</b>	Use fire-extinguishing media appropriate for surrounding materials. Water spray, foam, dry powder or carbon dioxide.
<b>Hazardous combustion products</b>	No hazardous decomposition products.
<b>Unusual Fire &amp; Explosion Hazards</b>	Dried residue can thermally decompose, giving off irritating and possibly toxic fumes.
<b>Special Fire Fighting Procedures</b>	Avoid breathing fire vapors. Ventilate closed spaces before entering them. Water spray should be used to cool containers.
<b>Protective equipment for fire-fighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions</b>	For personal protection, see section 8. In case of inadequate ventilation, use respiratory protection. Do not smoke, use open fire or other sources of ignition. In case of spills, beware of slippery floors and surfaces.
<b>Environmental Precautions</b>	Do not discharge into drains, water courses or onto the ground.
<b>Spill Clean Up Methods</b>	Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Flush with plenty of water to clean spillage area. Do not contaminate water sources or sewer. Place into chemical waste container for disposal according to local, state or federal regulations. Neutralize residue with lime or soda ash and flush spill area. DO NOT TOUCH SPILLED MATERIAL! Wash thoroughly after dealing with a spillage. Restrict non-essential personnel from the area.

**SECTION 7: HANDLING AND STORAGE**

<b>Handling</b>	Use proper personal protection when handling. Product for external use - do not swallow. Avoid all contact with skin, eyes and clothes. Handle in accordance with user instructions on label. Do not use contact lenses. Avoid inhalation of vapors and mists. Avoid prolonged or repeated contact. Do NOT ingest. Wash thoroughly after handling. Rinse container before disposal.
<b>Usage Description</b>	Use only according to directions.
<b>Storage Precautions</b>	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. The recommended storage temperature is above 32°F, preferably at room temperature (70°F). Keep away from oxidizing agents and strong acids.
<b>Specific End Use(s)</b>	The identified uses are in section I 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**

Provide eyewash, quick drench.  
Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

**Respiratory Equipment**

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**

When handling this product, it is recommended to wear chemical resistant gloves. The choice of suitable protective gloves depends on work conditions and what chemicals are handled, but we have positive experience with gloves made of Rubber or PVA.

**Eye Protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**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**

<b>Appearance</b>	Liquid.
<b>Color</b>	Clear, dark amber liquid.
<b>Odor</b>	Bland odor.
<b>Odor Threshold -Lower</b>	No Information available.
<b>Odor Threshold - Upper</b>	No Information available.
<b>pH-Value, Conc. Solution</b>	13.5
<b>Melting point</b>	32.0 °F
<b>Initial boiling point and boiling range</b>	212.0 °F

<b>Flashpoint</b>	No Information available.
<b>Evaporation rate</b>	No Information available.
<b>Flammability State</b>	No Information available.
<b>Flammability Limit - Lower (%)</b>	No Information available.
<b>Flammability Limit - Upper (%)</b>	No Information available.
<b>Vapor pressure</b>	Not determined.
<b>Vapor Density (air=1)</b>	Not determined.
<b>Relative density</b>	1.19 @ 68.0 °F
<b>Bulk Density</b>	No Information available.
<b>Solubility</b>	Completely soluble in water.
<b>Decomposition temperature</b>	No Information available.
<b>Partition coefficient; n-octanol/water</b>	No Information available.
<b>Auto Ignition Temperature (°C)</b>	No Information available.
<b>Viscosity</b>	No Information available.
<b>Explosive Properties</b>	No information available.
<b>Oxidizing properties</b>	No Information available.
<b>Molecular Weight</b>	No Information available.
<b>Volatile Organic Compound</b>	Not known.

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## SECTION 10: STABILITY AND REACTIVITY

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<b>Reactivity</b>	Reactions may occur with strong oxidizing materials and strong acids.
<b>Stability</b>	This product is stable at ambient temperatures and atmospheric pressures.
<b>Hazardous Polymerization</b>	Hazardous polymerization is not expected to occur under normal temperatures and pressures.
<b>Hazardous Decomposition Products</b>	None under normal conditions.
<b>Conditions to Avoid</b>	Avoid exposing to heat and contact with strong oxidizing substances.
<b>Materials to Avoid</b>	Keep away from strong oxidizing materials and strong acids. Do not mix with other chemicals unless listed on directions.

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## SECTION 11: TOXICOLOGICAL INFORMATION

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<b>Toxicological Information</b>	No toxicological information for the overall finished product.
<b>Acute Toxicity (Oral LD50)</b>	>950.00mg/kg Rat
<b>Acute Toxicity (Dermal LD50)</b>	>1307.00mg/kg Rabbit
<b>Acute Toxicity (Inhalation LC50)</b>	Not determined.
<b>Skin Corrosion/Irritation</b>	No Information available.
<b>Respiratory Sensitization</b>	No Information available.
<b>Skin Sensitization</b>	No Information available.
<b>Reproductive Toxicity:</b>	No Information available.
<b>Germ Cell Mutagenicity:</b>	
<b>Genotoxicity - In Vitro</b>	

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

<b>Carcinogenicity</b>	No Information available.
<b>NTP - Carcinogenicity</b>	The product and its components are not listed.
<b>OSHA - Carcinogenicity</b>	The product and its components are not listed.
<b>IARC Carcinogenicity</b>	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	

**SECTION 12: ECOLOGICAL INFORMATION**

<b>Ecotoxicity</b>	No Information available.
<b>Acute Toxicity - Fish</b>	LC50 96 Hours >4820.00ppm Onchorhynchus mykiss (Rainbow Trout)
<b>Acute Toxicity - Aquatic Invertebrates</b>	LC50 48 Hours >6340.00ppm Daphnia magna
<b>Acute Toxicity - Aquatic Plants</b>	No Information available.
<b>Degradability</b>	No information available.
<b>Bioaccumulative Potential</b>	No Information available.
<b>Mobility</b>	No Information available.
<b>Results of PBT and vPvB Assessment</b>	The product does not contain any PBT or vPvB substances.
<b>Other Adverse Effects</b>	None known.

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

**SECTION 13: DISPOSAL CONSIDERATIONS**

<b>Waste Management</b>	When handling waste, consideration should be made to the safety precautions applying to handling of the product. Observe all local, national and international regulations.
<b>Disposal Methods</b>	Dispose of waste and residues in accordance with local authority requirements. 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.

**SECTION 14: TRANSPORT INFORMATION**

<b>UN No. (DOT/TDG)</b>	3266 - CORROSIVE LIQUID, BASIC, INORGANIC, (Sodium Hydroxide)
<b>UN No. (IMDG)</b>	3266 - CORROSIVE LIQUID, BASIC, INORGANIC, (Sodium Hydroxide)
<b>UN No. (ICAO)</b>	3266 - Corrosive liquid, basic, inorganic (Sodium Hydroxide)
<b>DOT Proper Shipping Name</b>	3266 - CORROSIVE LIQUID, BASIC, INORGANIC, (Sodium Hydroxide)
<b>TDG Proper Shipping Name</b>	3266 - CORROSIVE LIQUID, BASIC, INORGANIC, (Sodium Hydroxide)
<b>DOT Hazard Class</b>	8

<b>DOT Hazard Label</b>	Class 8 - Corrosive
<b>TDG Class</b>	8
<b>TDG Label(s)</b>	8
<b>IMDG Class</b>	8
<b>ICAO Class</b>	8

**Transport Labels**

<b>DOT Pack Group</b>	II
<b>IMDG Pack Group</b>	II
<b>Air Pack Group</b>	II
<b>EMS</b>	F-A, S-B
<b>Environmentally Hazardous Substance/Marine Pollutant</b>	No

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**SECTION 15: REGULATORY INFORMATION**


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US Federal Regulations**SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**

The Following ingredients are 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

**SARA 313 Emission Reporting**

The Following ingredients are listed

**CAA Accidental Release Prevention**

The Following ingredients are listed

**OSHA Highly Hazardous Chemicals**

The Following ingredients are listed

US State Regulations**California Proposition 65 Carcinogens and Reproductive Toxins**

The Following ingredients are 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

**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**

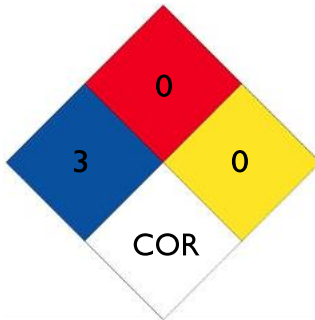
The Following ingredients are listed sodium hydroxide  
phosphonic acid

**Pennsylvania "Right To Know" List**

The Following ingredients are listed sodium hydroxide  
phosphonic acid

**SECTION 16: OTHER INFORMATION**

**NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)**



**HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)**

<b>Health</b>	3
<b>Flammability</b>	0
<b>Physical Hazard</b>	0
<b>Personal Protection</b>	C

**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.