Product	BT-4450
Revision Date	5/15/2015
Revision	1

Safety Data Sheet

SECTION 1: IDENTIFICATION

Product Name	BT-4450
Identifier Uses	Boiler Treatment
Supplier	Clear Water Technologies, LLC 13560 Colombard 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	Liquid.
Color	Clear, light pink liquid.
Odor	Sulfite Odor.
Pictogram(s)	
Signal Word	Danger
Hazard Statements	H302 Harmful if swallowed. H315 Causes skin irritation. H318 Causes serious eye damage.
Precautionary Statements	P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves/ protective clothing/eye protection/face protection. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. 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	tetrasodium ethylenediaminetetraacetate sodium hydroxide Glycine, N-(carboxymethyl)-N-[2-[(carboxymethyl)amino]ethyl]-, trisodium salt N-(Carboxymethyl-N,N'-ethylenediglycine, trisodium salt Trisodium ethylenediamine triacetate sodium metabisulphite potassium hydroxide
GHS Classification	
Physical and Chemical Hazards	Not classified
Human Health	Acute Tox 4 - H302, Skin Irrit.2 - H315, Eye Dam. 1 - H318
Environment	Not classified
OSHA Regulatory Status	This product is Hazardous under the OSHA Hazard communication Standard.
Inhalation	No specific symptoms noted, inhalation is not believed to be a likely route of exposure.
Ingestion	Harmful if swallowed.
Skin contact	Irritation or pain may occur at the site of contact.
Eye contact	Extreme irritation of eyes and mucous membranes, including burning and tearing. Causes serious eye damage.
Routes of Exposure	Unknown

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.

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General Information	General first aid, rest, warmth and fresh air.
Inhalation	Remove victim immediately from source of exposure. Keep the affected person warm and at rest. Get prompt medical attention.
Ingestion	NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Rinse mouth thoroughly. Get medical attention immediately!
Skin contact	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.
Eye contact	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.

Most important symptoms and effects, both acute and delayed

General Information	
Inhalation	No specific symptoms noted, inhalation is not believed to be a likely route of exposure.
Ingestion	Harmful if swallowed.
Skin contact	Irritation or pain may occur at the site of contact.
Eye contact	Extreme irritation of eyes and mucous membranes, including burning and tearing. Causes serious eye damage.
Routes of Exposure	Unknown

Most important symptoms and effects, both acute and delayed

Notes to the Physician	Treat Symptomatically.

SECTION 5: FIREFIGHTING MEASURES

Auto Ignition Temperature (°C)	No Information available.
Flammability Limit - Lower (%)	No Information available.
Flammability Limit - Upper (%)	No Information available.
Flash point	No Information available.
Extinguishing Media	Use fire-extinguishing media appropriate for surrounding materials. Water, foam, dry chemical or carbon dioxide.
Hazardous combustion products	Combustion may lead to the release of oxides of sulfur.
Unusual Fire & Explosion Hazards	Irritating vapors may be emitted during a fire.
Special Fire Fighting Procedures	Use water to cool containers exposed to a fire.
Protective equipment for fire- fighters	Wear full protective clothing and self-contained breathing apparatus, suitable gloves and boots.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions 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.

Environmental Precautions Keep out of drains, municipal sewers, open bodies of water and water course.

Spill Clean Up Methods Restrict non-essential personnel from the area. Wear protective clothing, goggles and respirator if ventilation is not adequate. Squeegee and collect the spillage or vacuum the spillage. Place collected spillage into containers for reuse or disposal. Dispose according to local, state or federal regulations at an approved chemical waste reprocessing facility.
Neutralize spill area with lime or soda ash and flush with large amounts of water.

SECTION 7: HANDLING AND STORAGE

Handling Use proper personal protection when handling. Provide good ventilation. Avoid contact with skin and eyes and clothing. 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.

Usage Description Store in a cool, dry, and well-ventilated place away from incompatible materials. Vent containers frequently, and more often in warm weather to relieve pressure. Keep container tightly closed when not in use. Do not get in eyes, on skin, or on clothing.

Storage Precautions Store closed containers in a cool, dry, well-ventilated area away from incompatible materials. This product is stable under normal conditions of handling and storage. Avoid cold temperatures. The recommended storage temperature is above 32°F, preferably at room temperature (70°F).Keep away from oxides of sulfur.

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 (8Hrs.)		STEL (15mins)		Notes
sodium hydroxide	OSHA		2mg/m3			
Cobalt	OSHA		0.1mg/m3			

Ingredient Comments OSHA

Process Conditions Provide eyewash, quick drench.

Engineering Measures 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. In the case of inadequate ventilation use a NIOSH approved 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 Use rubber or plastic gloves to minimize skin contact.

Eye Protection To avoid contact with eyes, use safety glasses or chemical splash goggles. Face shield is recommended. 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 Liquid.

Color Clear, light pink liquid.

Odor Sulfite Odor.

Odor Threshold - Lower No Information available.

Odor Threshold - Upper No Information available.

pH-Value, Conc. Solution 6.1

Melting point 32.0 °F

Initial boiling point and boiling range
212.0 °F

Flash point 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	Not determined.
Vapor Density (air=1)	Not determined.
Relative density	1.262 @ 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 materials and strong acids.
Stability	This product is stable at ambient temperatures and atmospheric pressures.
Hazardous Polymerization	Hazardous polymerization is not expected to occur under normal temperatures and pressures.
Hazardous Decomposition Products	Hazardous decomposition will result in the release of oxides of sulfur.
Conditions to Avoid	Avoid exposing to heat and contact with strong oxidizing substances.
Materials to Avoid	Keep away from strong oxidizing materials and strong acids.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicological Information	No toxicological information for the overall finished product.
Acute Toxicity (Oral LD50)	>425.00mg/kg Rat
Acute Toxicity (Dermal LD50)	No Information available.
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:	
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	cobalt: 2B IARC Group 2B possibly carcinogenic to humans.
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
potassium hydroxide	284mg/kg Rat		
cobalt	6170mg/kg Rat		

SECTION 12: ECOLOGICAL INFORMATION

Eco toxicity No Information available.

Acute Toxicity - Fish LC50 96 Hours >350.00ppm Onchorhynchus mykiss (Rainbow Trout)

Acute Toxicity - Aquatic Invertebrates LC50 48 Hours >1400.00ppm Daphnia magna

Acute Toxicity - Aquatic Plants	EC50 72 Hours >150.00ppm
Degradability	No information available.
Bio accumulative Potential	No Information available.
Mobility	No Information available.

Results of PBT and vPvB Assessment The product does not contain any PBT or vPvB substances.

Other Adverse Effects	None known.

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	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

UN No. (DOT/TDG)	Not applicable.
UN No. (IMDG)	Not applicable.
UN No. (ICAO)	Not applicable.
DOT Proper Shipping Name	Not applicable.
TDG Proper Shipping Name	Not applicable.
DOT Hazard Class	Not applicable.
DOT Hazard Label	Not applicable.
TDG Class	Not applicable.
TDG Label(s)	Not applicable.
IMDG Class	Not applicable.
ICAO Class	Not applicable.
Transport Labels	
DOT Pack Group	Not applicable.
IMDG Pack Group	Not applicable.
Air Pack Group	Not applicable.
EMS	Not applicable.
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

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

The Following ingredients are listed
sodium hydroxide
potassium hydroxide
cobalt

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
The Following ingredients are listed

SARA 313 Emission Reporting
The Following ingredients are listed cobalt

CAA Accidental Release Prevention
The Following ingredients are listed cobalt

OSHA Highly Hazardous Chemicals
The Following ingredients are listed cobalt

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins
The Following ingredients are listed cobalt

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
sodium metabisulphite
potassium hydroxide
cobalt

Rhode Island "Right To Know" List
The Following ingredients are listed sodium hydroxide
potassium hydroxide
cobalt

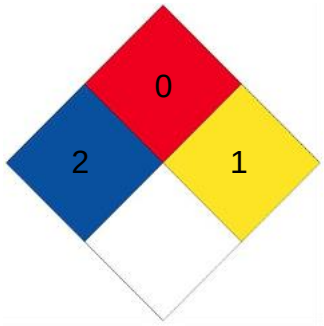
Minnesota "Right To Know" List
The Following ingredients are listed sodium hydroxide
sodium metabisulphite
potassium hydroxide
cobalt

New Jersey "Right To Know" List
The Following ingredients are listed sodium hydroxide
sodium metabisulphite
potassium hydroxide
cobalt

Pennsylvania "Right To Know" List
The Following ingredients are listed sodium hydroxide
sodium metabisulphite
potassium hydroxide
cobalt

SECTION 16: OTHER INFORMATION

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)



HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)

Health	2
Flammability	0
Physical Hazard	1
Personal Protection	B

Revision Comments
Revision Date 5/15/2015
Revision 1

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.