

Product BW493
 Revision Date 07/03/2015
 Revision 1



Safety Data Sheet

SECTION 1: IDENTIFICATION

Product Name	BW493
Identifier Uses	Boiler Treatment.
Supplier	Cannon Water Technology Inc. 233 Technology Way, Suite 9 Rocklin, California 95765 Tel: 916-315-2691
Contact Person	csd@cannonwater.com
Emergency Telephone	24-HOUR EMERGENCY TELEPHONE: CHEMTEL: 1-800-255-3924 CONTRACT # MIS0001465

SECTION 2: HAZARDS IDENTIFICATION

Appearance	Clear, colorless liquid.
Color	Clear, colorless.
Odor	Odorless.
Pictogram(s)	
Signal Word	Danger
Hazard Statements	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage
Precautionary Statements	P234 Keep only in original container. 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	Me. Corr 1 - H290
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. Symptoms of exposure may include chest pain and pulmonary edema. 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. Symptoms of exposure may include nausea and vomiting. 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, eye

Routes of Exposure	damage, or blindness. Symptoms of exposure may include redness, itching, swelling, tearing or pain. Effects of contact may be delayed. Avoid contact. No Information available.
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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 MEASURES

Description 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. Give artificial respiration if the exposed person is not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. If respiration or pulse has stopped, have a trained person administer Basic Life Support (Cardio-Pulmonary Resuscitation/Automatic External Defibrillator) and CALL FOR EMERGENCY SERVICES IMMEDIATELY.
Ingestion	If this product is ingested, give the exposed person large amounts of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting unless directed to do so by medical personnel. If vomiting occurs spontaneously, keep airway clear. Give more water when vomiting stops. GET MEDICAL ATTENTION IMMEDIATELY.
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. Thoroughly clean and dry contaminated clothing before reuse. Discard contaminated leather goods. GET MEDICAL ATTENTION IMMEDIATELY.
Eye contact	If this product contacts the eyes, immediately flush eyes with plenty of clean running water for at least fifteen (15) minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissues. Remove contact lenses if worn. Washing eyes within several seconds is essential to achieve maximum effectiveness. GET MEDICAL ATTENTION IMMEDIATELY.

Most important symptoms and effects, both acute and delayed

General Information	No information available
Inhalation	Inhalation of vapors or fumes may be cause moderate to severe irritation to mucous membranes and respiratory tract. Symptoms of exposure may include chest pain and pulmonary edema. 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. Symptoms of exposure may include nausea and vomiting. 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, eye damage, or blindness. 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	Treat 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	Irritating vapors may be emitted during a fire.

Special Fire Fighting Procedures	Move container from fire area if it can be done without risk. 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. This material is alkaline and may raise the pH of surface waters with low buffering capacity. Releases should be reported, if required, to appropriate agencies.
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. Soak up material with sand or other absorbent or vacuum the spillage. Place absorbent or spillage into chemical waste container for disposal according to local, state or federal regulations. Flush spill area with 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. When mixing, slowly add to water to minimize heat generation and splattering.
Usage Description	Use only according to directions.
Storage Precautions	Keep container tightly closed. Do not store in heat or direct sunlight. Keep in dry, cool, and well ventilated place. The recommended storage temperature is 34°F to 129 °F, preferably at room temperature 70° the recommended storage temperature is above 32°F, preferably at room temperature (70°F).
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	Keep container tightly sealed when not in use. 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	A NIOSH approved respirator with N95 (dust, fume, mist) filters may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. A half face piece air-purifying respirator may be used in concentrations up to ten (10) times the acceptable exposure level and a full face piece air-purifying respirator may be used in concentrations up to fifty (50) times the acceptable exposure level. Supplied air should be used when the level is expected to be above fifty (50) times the acceptable level, or when there is a potential for uncontrolled release.
Hand Protection	Wear chemical resistant gloves complying with EN374. Longer term protection: Butyl rubber. Incidental contact/Splash protection: Natural rubber. Neoprene rubber. Nitrile rubber. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice

Eye Protection	from glove suppliers. Contaminated gloves should be replaced.
Hygiene Measures	Wear safety goggles in accordance with EN 166. Eye protection equipment should be tested and approved according to regulations applicable, like NIOSH (US) or EN 166 (EU). 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, colorless liquid.
Color	Clear, colorless.
Odor	Odorless.
Odor Threshold - Lower	No Information available.
Odor Threshold - Upper	No Information available.
pH-Value, Conc. Solution	14.0
Melting point	59.0 °F
Initial boiling point and boiling range	291.0 °F
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	13.00 mm Hg 0.00
Vapor Density (air=1)	No Information available.
Relative density	1.54 @ 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	Reaction may occur with acids, halogenated compounds, prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys.
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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	None under normal conditions.
Conditions to Avoid	Avoid exposing to heat and contact with strong alkali and oxidizing materials.
Materials to Avoid	Avoid contact with Acids, halogenated compounds, prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicological Information	The severity of the tissue damage is a function of its concentration, the length of tissue contact time, and local tissue conditions. After exposure there may be a time delay before irritation and other effects occur. This material is a strong irritant and is corrosive to the skin, eyes, and mucous membranes. This material may cause severe burns and permanent damage to any tissue with which it comes into contact. Inhalation will cause severe irritation, possible burns with pulmonary edema, which may lead to pneumonitis.
Acute Toxicity (Oral LD50)	220.00mg/kg Rat
Acute Toxicity (Dermal LD50)	1350.00mg/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:	
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	This material is inorganic and not subject to biodegradation. This material is believed to exist in the disassociated state in the environment. This material is believed not to bioaccumulate. This material has exhibited slight toxicity to terrestrial organisms.
Acute Toxicity - Fish	No Information available.
Acute Toxicity - Aquatic Invertebrates	LC50 48 Hours 100.00ppm Daphnia magna
Acute Toxicity - Aquatic Plants	No Information available.
Degradability	The product is not readily biodegradable.
Bioaccumulative Potential	Does not bioaccumulate.
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) 1824 - SODIUM HYDROXIDE SOLUTION

UN No. (IMDG) 1824 - SODIUM HYDROXIDE SOLUTION

UN No. (ICAO) 1824 - Sodium hydroxide solution

DOT Proper Shipping Name 1824 - SODIUM HYDROXIDE SOLUTION

TDG Proper Shipping Name 1824 - SODIUM HYDROXIDE SOLUTION

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 sodium hydroxide

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

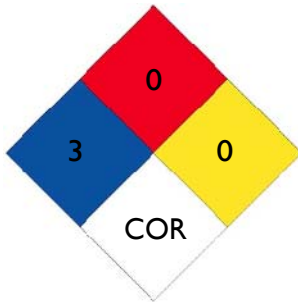
New Jersey "Right To Know" List

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	1
Personal Protection	J

Revision Comments**Revision Date**

07/03/2015

Revision

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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.