

Co. Reg No.: 199505807R

SAFETY DATA SHEET

DATE OF ISSUE: July 30, 2022

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Identification of the substance or preparation

Product code : BWT 104

Product name : Boiler Water Treatment (B.W.T.)

Chemical family : Water Treatment

Product Description : A mixture of inhibitor, oxygen scavenger and alkalis.

Supplier : Goldcrest International Singapore Pte Ltd
38 Tech Park Crescent
Singapore 638098
Tel: (65) 6862 6006
Fax: (65) 6863 3665
Email: sales@goldcrest.com.sg

SECTION 2 – HAZARDS IDENTIFICATION

GHS Classification

Skin corrosion (Category 1)

Serious eye damage (Category 1)

Other hazards

Contact with acids liberates toxic gas.

GHS Label elements, including precautionary statements

Pictogram:



Signal word: Danger

Hazard statements

Health

H314: Causes severe skin burns and eye damage.

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Precautionary statements

Prevention

P264: Wash skin thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301+330+P331: IF SWALLOWED: rinse mouth. DO NOT induce vomiting.

P303+361+353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

P332+313: If skin irritation occurs: Get medical advice/attention.

P337+313: If eye irritation persists get medical advice/attention.

Storage

P405: Store locked up.

Disposal

P501: Dispose of contents/container to an approved waste disposal plant.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

| Component | Formula | CAS – No. | Concentration % |
|------------------|---------------------------------|-----------|-----------------|
| Sodium hydroxide | NaOH | 1310-73-2 | 3 - 5 |
| Sodium sulfite | Na ₂ SO ₃ | 7757-83-7 | 6 - 12 |

SECTION 4 - FIRST AID MEASURES

Description of first aid measures

General advice:

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled:

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact:

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

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In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

Burning sensation, cough, wheezing, laryngitis and shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, this material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes and skin.

SECTION 5 – FIRE-FIGHTING MEASURES

This product is water based and so it is not flammable.

Extinguishing media

Suitable Extinguishing Media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Avoid breathing dust, vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods for containment and cleaning up:

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

SECTION 7 - HANDLING AND STORAGE

Precautions for Safe Handling:

Avoid inhalation of vapor or mist.

Conditions for safe storage

Store this material in a cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

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SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational Exposure Limits:

| Component | CAS-No. | Value | Control parameters | Basis |
|------------------|-----------|------------------|---------------------|---|
| Sodium hydroxide | 1310-73-2 | PEL (short term) | 2 mg/m ³ | Singapore. Workplace safety and Health Act – first Schedule Permissible Exposure Limits of Toxic substances |

Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Use safety glasses with side-shields conforming to EN 166. Use equipment for eye protection tested and approved under appropriate government standards.

Skin protection

Handle with nitrile rubber gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection

Wear impervious clothing. The type of equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination respirator cartridges as a backup to engineering controls. The respirators and respirator components should be tested and approved under appropriate government standards.

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

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SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Clear colorless liquid
Odor : Faint
Flash point : Not flammable
Boiling point : 105°C
Specific gravity : 1.18 – 1.20
Solubility in water : 100% Soluble
(% by weight)
pH value at 25°C : >12.0

SECTION 10 – STABILITY AND REACTIVITY

Stability:

Stable under normal conditions of use and storage

Conditions to avoid:

High temperatures.

Incompatible Materials:

Acids, organic materials, chlorinated solvents, aluminum, phosphorus, tin/tin oxides and zinc.

Hazardous Decomposition Products:

Other decomposition products – Contact with acids releases sulfur dioxide.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute toxicity

Based on Sodium hydroxide

Oral-rat or rabbit LD50: 500 mg/kg

Dermal-rat or rabbit LD50: 1350 mg/kg

Based on Sodium sulfite

LD50 Oral – rat – 3,560 mg/kg

LC50 Inhalation – rat – 4 h – > 5,500 mg/m³**Potential health effects**

Inhalation : May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion : May be harmful if swallowed.

Skin : May be harmful if absorbed through skin. Causes skin irritation.

Eyes : Causes serious eye irritation.

Signs and symptoms of exposure

Burning sensation, cough wheezing, laryngitis, shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, and pulmonary edema. The material is destructive to tissue of the mucous membranes and upper respiratory tract, eyes and skin.

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SECTION 12 - ECOLOGICAL INFORMATION

Environmental toxicity

Based on Sodium sulfite

Toxicity

Toxicity to fish: LC50 – *Gambusia affinis* (Mosquito fish) – 660 mg/l – 96 h

Based on Sodium hydroxide

Ecotoxicity – Acute toxicity: *Daphnia magna*: 48 hour LC50 40 – 240 mg/L

Mobility:

High water solubility indicates that sodium hydroxide will be found predominately in aquatic environment. During movement through soil some ion exchange will occur. Also, some of the hydroxide may remain in the aqueous phase and will move downward through soil in the direction of groundwater flow. Sodium hydroxide does not cause biological oxygen deficit.

Persistence and Degradation

Air: There is no degradation.

Soil: Considerable solubility and mobility; Ground water contamination if raining.

Water: Considering its high water solubility, sodium hydroxide is not expected to bioaccumulate.

Bioaccumulation: Not expected to bioaccumulate.

Biodegradation: Not biodegradable

Environmental adverse effects:

The toxicity to aquatic life will be influenced by the hardness and alkalinity of the receiving water. The upper pH limit tolerated by most freshwater fish is 8.4; the pH must generally be greater than 9 before the aqueous environment becomes lethal for fully developed fish. Freshwater algae are destroyed above pH 8.5.

SECTION - 13 DISPOSAL CONSIDERATIONS

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

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SECTION 14 - TRANSPORT INFORMATION

Land Transport ADR/RID
Hazard Class

8
UN ID Number : UN 1719
Packing Group II
Proper Shipping Name : Caustic alkali Liquid N.O.S.

Sea Transport (IMDG)
Hazard Class

8
UN ID Number : UN 1719
Packing Group II
Proper Shipping Name : Caustic alkali Liquid N.O.S.

Air Transport (ICAO/IATA)
Hazard Class

8
UN ID Number : UN 1719
Packing Group II
Proper Shipping Name : Caustic alkali Liquid N.O.S.

SECTION 15 - REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Notification status

All components of this product are in compliance with the inventory of AICS, DSL, ENCS, IECSC, ISHL, KECI, NZLoC and PICCS.

SECTION 16 - OTHER INFORMATION

The information contained herein relates only to the specific material identified. This information is accurate and reliable on the date of this safety data sheet, but no warranty or representation is made as to the accuracy, reliability or completeness of information. It is offered solely for your consideration, investigation and verification. Before using this product, read all information provided.