



# Safety Data Sheet

## Boiler Water Treatment BAN-6090

### Section 1 Identification

**Trade Name:** Boiler Water Treatment BAN-6090      **Date Prepared:** 02/25/2016  
**Product Identification:** GLA-BAN6090  
**Synonyms:** None      **CAS No:** 110-91-8

**Product Use Description:**  
Industrial Water Treatment/Corrosion Inhibitor

#### Details of the supplier of the safety data sheet

G.L.A Water Inc.  
17802 Rapids Road  
HIRAM, OH 44234 US

**Phone:** (440) 834-8435

**website:** [www.glawater.com](http://www.glawater.com)

#### Emergency telephone number

Infotrac (800) 535-5053 (US & Canada)  
(352) 323-3500

### Section 2 Hazards Identification

**GHS Classification:** Flammable Liquid Category 3  
Acute Toxicity Oral Category 4  
Acute Toxicity Dermal Category 3  
Acute Toxicity Inhalation Category 3  
Skin Corrosion/Irritation Category 1A  
Serious Eye Damage/Irritation Category 1  
Aquatic Toxicity Acute Category 3

#### GHS label elements:



Corrosive      Toxic      Flammable

**Signal Word:** Danger

#### Hazard Statements:

- H226** Flammable liquid and vapour
- H302** Harmful if swallowed
- H311** Toxic in contact with skin
- H314** Causes severe skin burns and eye damage
- H318** Causes serious eye damage
- H331** Toxic if inhaled
- H402** Harmful to aquatic life

#### Precautionary Statements:

##### Prevention

- P210** Keep away from heat, sparks, open flames and hot surfaces. — No smoking.
- P233** Keep container tightly closed.
- P240** Ground container and receiving equipment.
- P241** Use explosion-proof equipment.
- P242** Use only non-sparking tools.



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- P243** Take precautionary measures against static discharge.  
**P261** Avoid breathing mist, vapours or spray.  
**P264** Wash skin thoroughly after handling.  
**P270** Do not eat, drink or smoke when using this product.  
**P271** Use only outdoors or in a well-ventilated area.  
**P273** Avoid release to the environment.  
**P280** Wear protective gloves, protective clothing and eye protection or face protection.

### Response

- P301 + P330 + P331** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
**P303 + P361 + P353** IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse SKIN with water.  
**P304 + P340** IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.  
**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 physician.  
**P362 + P364** Take off contaminated clothing and wash before reuse  
**P370 + P378** In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

### Storage

- P403 + P235** Store in a well-ventilated place. Keep cool.  
**P405** Store locked up.

### Disposal

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

### Hazards Not Otherwise Classified (HNOC):

None.

### Additional Information:

None.

## Section 3 Composition

Chemical Name	Common name and synonyms	CAS #	%
morpholine		110-91-8	85 - 90

## Section 4 First Aid

### General:

Move out of dangerous area. Perform first aid measures as indicated. Seek immediate medical attention and show this safety data sheet to attending physician.

### Inhalation:

Move to fresh air and keep at rest in a position comfortable for breathing. If breathing difficulty occurs or persists seek immediate medical attention. If not breathing give artificial respiration and seek immediate medical attention.

### Skin contact:

Immediately flush exposed skin with water for at least 15 minutes while removing contaminated clothing and/or shoes. Seek immediate medical attention.

### Eye contact:

Immediately flush eyes with water for at least 15 minutes, lifting the upper and lower eyelids intermittently. Check for and remove any contact lenses if easy to do. Seek immediate medical attention.

### Ingestion:

Rinse mouth with water. Do not induce vomiting. Seek immediate medical attention.

### Most important symptoms and effects both acute and delayed:

No information available.

### Indication of any immediate medical attention and special treatment needed:

No information available.



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### Section 5 Fire Fighting Measures

**Suitable Extinguishing Media:**

Use alcohol foam, carbon dioxide, dry chemical or water spray. Use water spray to cool fire exposed containers.

**Unsuitable Extinguishing Media:**

No information available.

**Specific hazards developing from the chemical:**

Combustion may produce oxides of nitrogen, carbon monoxide, carbon dioxide and other unidentified organic compounds.

**Precautions for firefighters:**

No information available.

**Firefighting Instructions:**

No information available.

**Protection During Firefighting:**

Wear full protective gear and full face pressure demand self-contained breathing apparatus.

**Other information:**

No additional information available.

### Section 6 Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:**

Avoid direct contact with skin, eyes and clothing. Avoid inhalation of mist, vapor or dust. Wear appropriate personal protective equipment as outlined in Section 8 of this SDS.

**Environmental precautions:**

Prevent further leakage or spillage if safe to do so. Contain spilled material and prevent run-off onto ground or into water sources or sewers. Remove or eliminate all sources of ignition.

**Methods and material for containment and cleaning up:**

Absorb on inert material and place in containers for disposal. Dispose of spilled/collected material in accordance with all federal, state and local regulations.

### Section 7 Handling and Storage

**Precautions for safe handling:**

Avoid contact with skin and eyes. Avoid inhalation of mist, vapor and dust. Ensure adequate ventilation. Do not eat, drink or smoke while handling. Wear appropriate personal protective equipment as outlined in Section 8 of this SDS.

**Conditions for safe storage, including any incompatibilities:**

Store in original container. Keep container tightly closed. Store at room temperature (50-90 F) in a dry well-ventilated area.

### Section 8 Exposure Controls/Personal Protection

**Exposure limits:**

Ingredient	Data Source	Exposure Form	Exposure Value	Exposure Notes
morpholine	ACGIH TLV	TWA	20 ppm	
	NIOSH REL	TWA	20 ppm	
	OSHA PO	TWA	20 ppm	
	OSHA Z-1	TWA	20 ppm	

**Appropriate Engineering Controls:**

Use explosion proof electrical equipment, non-sparking tools and ground all containers while handling this product.

**Individual protection measures:****Eye/face protection:**

Chemical goggles or face shield should be worn when handling this material.

**Skin protection:****Hand Protection:**

Wear chemical resistant gloves when handling.

**Other:**



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Wear chemical resistant apron when handling.

### Respiratory Protection:

Wear respiratory protection while using this material.

### General hygiene considerations:

Follow good hygiene and safety practice. Wash hands and exposed skin before breaks and at the end of the work day. Do not eat, drink or smoke while handling this material. Do not wear contaminated or dirty clothing home from the work-site. Launder contaminated or dirty clothing before reuse.

### Additional information:

No additional information available.

## Section 9 Physical and Chemical Properties

Appearance	Colorless to Yellow
	Liquid
Odor	Amine
Odor threshold	Not available.
pH	10
Melting/freezing point	Not available.
Initial boiling point	Not available.
Flash point	105°F (41°C) TCC
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Lower flammability limit	Not available.
Upper flammability limit	Not available.
Lower explosive limit	Not available.
Upper explosive limit	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility in water	Miscible
PC: n-octanol/water	Not available.
Auto-Ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Density	Not available.
Specific gravity	1.00

## Section 10 Stability and Reactivity

Reactivity :	Not reactive under normal use conditions.
Chemical stability :	Material is stable under normal handling and storage conditions.
Hazardous reactions :	Hazardous polymerization will not occur under normal handling and storage.
Conditions to avoid :	Avoid excessive heating, freezing and chemical contamination. Avoid sources of ignition.
Decomposition products:	No decomposition products are expected under normal storage and handling conditions.
Incompatible materials:	Avoid contact with oxidizers and strong acids.

## Section 11 Toxicological Information

### Information on the likely routes of exposure:

#### Inhalation:

This material may cause respiratory irritation, dizziness, nausea and vomiting.

#### Skin Contact:

This material may cause severe skin irritation . May be harmful if absorbed through the skin.

#### Eye Contact:

This material may cause eye irritation and injury.



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**Ingestion:**

This material may cause irritation of the gastrointestinal system and may be harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics:**

No information available.

**Delayed and chronic effects:**

No information available.

**Numerical measures of toxicity:**

Components	Exposure	Species	Dose	Notes
<b>morpholine:</b>				
Oral	LD50	Estimate	500 mg/kg	
Dermal	LD50	Estimate	1091 mg/kg	
Inhalation	LC50	Estimate	11313 ppm	

**Toxicological effects:**

**Acute Toxicity:**

Mixture:

No information available.

**Skin Corrosion/Irritation:**

Mixture:

No information available.

**Serious Eye Damage/Irritation:**

Mixture:

No information available.

**Respiratory sensitization:**

Mixture:

No information available.

**Skin sensitization:**

Mixture:

No information available.

**Germ cell mutagenicity:**

Mixture:

No information available.

**Carcinogenicity:**

Mixture:

This product is considered to be a potential carcinogen by:

NTP: No

OSHA: No

IARC: No

**Reproductive toxicity:**

Mixture:

This product may cause reproductive and developmental effects.

**STOT-single exposure:**

Mixture:

No information available.

**STOT-repeated exposure:**

Mixture:

No information available.

**Aspiration hazard:**

Mixture:

This product is not an aspiration hazard.

**Additional information:**

None.

## Section 12 Ecological Information

**Ecotoxicity:**

No information available.

**Numerical measures of ecotoxicity:**

Components	Type	Species	Dose	Notes
<b>morpholine:</b>				



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Fish	LC50	Rainbow Trout	180 mg/l	96 hr
Invertebrate	EC50	Daphnia magna	100 mg/l	48 hr
Algae	EC50	Green Algae	>310 mg/l	72 h

**Persistence and degradability:**

Mixture:  
No information available.

**Bioaccumulative potential:**

Mixture:  
No information available.

**Mobility in soil:**

Mixture:  
No information available.

**Other adverse effects:**

Mixture:  
No information available.

**Additional information:**

No information available.

## Section 13 Disposal Considerations

**Disposal instructions:**

Dispose of material in accordance with all federal, state and local regulations.

**Contaminated packaging:**

Triple rinse container and offer for recycling. Dispose of container following all federal, state and local regulations.

**Additional Information:**

No additional information available.

## Section 14 Transport Information

**DOT:**

**UN number:** UN2734

**UN proper shipping name:** UN2734, Amines, Liquid, Corrosive, Flammable, N.O.S. (Morpholine) , 8 (3), (8,3) , PGII

**Class:** 8

**Subsidiary risk:** 3

**Label(s):** 8, 3

**Packing group:** II

**Packaging exceptions:** none

## Section 15 Regulatory Information

**Federal regulations:****SARA 311/312 Hazard categories:**

Immediate (Acute) Health Hazard  
Fire Hazard

**SARA 302 Extremely hazardous substance:**

Not listed.

**SARA 304 Emergency release notification:**

Not regulated.

**SARA 311/312 Hazardous chemical:**

No

**SARA 313 Toxic Release Inventory (TRI) report:**

Not regulated.

**CERCLA Hazardous substance list:**

Not Listed.

**Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA):**

This chemical is not a pesticide product.

**Clean Air Act regulated substances:**

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Volatile Organic Compounds (VOCs) in SOCM1:  
morpholine

**Clean Water Act regulated substances:**  
None.

**U.S. state regulations:**

**Massachusetts RTK Substances**

morpholine Reportable Quantity: >90%

**New Jersey RTK Substances**

morpholine Reportable Quantity: >90%

**Pennsylvania RTK Substance**

morpholine Reportable Quantity: >90%

**Canadian regulations:**

**Canadian Ingridient Disclosure List substances:**

None listed.

**WHMIS classification:**

Not classified.

### Section 16 Other Information

HMIS hazard ID:



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; \*-Chronic health effect

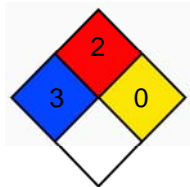
NFPA hazard ID:

Flamability:

Health:

Reactivity:

Special hazard:



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

**Disclaimer:** This Manufacturer believes that the information contained in the Safety Data Sheet is accurate. The suggested procedures are based on experience as of the date of the publication. They are not necessarily all inclusive nor fully adequate in every circumstance. Also, the suggestions should not be confused with, nor followed in violation of applicable laws, regulations, rules or insurance requirements.

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