

## **SECTION 1 - IDENTIFICATION**

**Product:** AQUATROL® 14750

**Recommended use of the chemical and restrictions on use:**

**Uses:** Steamline treatment.

**List of advices against:** Not available.

**Details of the supplier of the Safety Data Sheet:**

Momar, Inc.  
1830 Ellsworth Industrial Dr.  
Atlanta, Ga. 30318  
404-355-4580  
800-556-3967  
www.momar.com

**Emergency Telephone Number (INFOTRAC):** North America: 1-800-535-5053  
International: 1-352-323-3500

## **SECTION 2 – HAZARD IDENTIFICATION**

<b>Classification:</b>	Flammable Liquids:	3
	Acute Toxicity - Oral:	2
	Acute Toxicity – Dermal:	3
	Skin Corrosion/Irritation:	1B
	Eye Damage/Irritation:	1
	Toxic to Reproduction:	2

**Signal Word:** Danger.

**Hazard Statements:** Flammable liquid and vapor.  
Fatal if swallowed.  
Toxic in contact with skin.  
Causes severe skin burns and eye damage.  
Causes serious eye damage.  
Suspected of damaging fertility or the unborn child.

**Pictograms:**



**Precautionary Statements:**

**Prevention:** Keep away from heat/sparks/open flames/hot surfaces. – No smoking.  
Keep container tightly closed.  
Ground/Bond container and receiving equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Wash hands and all exposed skin thoroughly after handling.  
Do not eat, drink, or smoke when using this product.

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

Do not breathe dusts or mists.

Use only outdoors or in a well-ventilated area.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

- Response:** If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
- In case of fire: Use water spray, CO<sub>2</sub>, foam, or dry chemical to extinguish.
- If swallowed: Immediately call a poison center/doctor/hospital. Rinse mouth. Do NOT induce vomiting.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If inhaled: Remove person to fresh air and keep comfortable for breathing.
- Call a poison center/doctor/hospital if you feel unwell.
- If exposed or concerned: Get medical advice/attention.
- Storage:** Store locked up.
- Store in a well-ventilated place. Keep cool.
- Disposal:** Dispose of contents/container to approved waste disposal plant in accordance with federal, state, and local regulations.
- Other Hazards:** None known.

### **SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Name	CAS Number	Percent Weight
Diethylaminoethanol	100-37-8	40
Cyclohexylamine	108-91-8	40

### **SECTION 4 – FIRST AID MEASURES**

- Eye Contact:** Immediately flush eyes with plenty of water for at least 15-20 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Get medical attention immediately.
- Skin Contact:** Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing. Wash clothing and shoes before reuse. Get medical attention immediately.
- Inhalation:** Move victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and get immediate medical attention.
- Ingestion:** Get medical attention immediately. Do not induce vomiting. If victim is conscious and alert, give large amounts of water. Discontinue water if victim feels like they may vomit. Never give anything by mouth to an unconscious person. Keep head low in case of vomiting to keep material from entering lungs.

**Most Important Symptoms and Effects:**

- Acute:** Toxic if swallowed or contacts skin. Causes severe skin burns and eye damage.
- Delayed:** Prolonged or repeated skin contact can cause dermatitis or skin destruction.

**Indication of Any Immediate Medical Attention and Special Treatment Needed:** None known.

**SECTION 5 – FIREFIGHTING MEASURES**

**Extinguishing Media:** Use dry chemical, carbon dioxide, water spray, or alcohol resistant foam.

**Specific Hazards Arising From the Substance or Product:** None.

**Hazardous Combustion Products:** Oxides of carbon and nitrogen, smoke, and fumes.

**Protective Equipment and Precautions for Firefighters:** Wear a self-contained breathing apparatus in pressure- demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

**SECTION 6 – ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment, and Emergency Procedures:** Avoid contact with skin and eyes. Wear protective clothing.

**Environmental Precautions:** Keep out of sewers and drains. Spills should be diked and absorbed. Discharge into the environment should be avoided.

**Methods and Materials for Containment and Cleaning Up:** Absorb in vermiculite, dry sand, or earth, and place in containers. Collect and reclaim or dispose of in sealed containers in a licensed waste facility. Liquid material may be removed with a vacuum truck. Containers with spillage must be properly labeled with correct contents and hazard symbol.

**SECTION 7 – HANDLING AND STORAGE**

**Precautions for Safe Handling:** Keep away from ignition sources. Avoid spilling, skin, and eye contact. Wash thoroughly after handling. Use only with adequate ventilation. For industrial or professional use only. Do not cut or weld empty container. KEEP OUT OF REACH OF CHILDREN.

**Conditions for Safe Storage:** Store in a cool dry place. Store container tightly closed. Store separately from sources of ignition.

**Incompatibilities:** Strong acids, oxidizing agents, and ignition sources.

**SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION****Exposure Limits and Recommendations:**

Chemical Name	OSHA PEL	ACGIH TLV	Other Exposure Limits
Diethylaminoethanol	10 ppm (skin)	2 ppm	Not listed
Cyclohexylamine	10 ppm	10 ppm	Not listed

**Engineering Controls:**

Normal ventilation.

**Personal Protection Measures:****Respiratory Protection:**

As needed for vapors and mists. Use NIOSH approved filter for caustic materials.

**Skin and Body:**

Chemical apron and gloves.

**Eye Protection:**

Safety glasses/goggles. Face shield as needed.

**Other Recommendations:**

None.

**SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES****Appearance and Odor:**

Clear, colorless liquid with ammonia odor.

**Odor Threshold:**

Not determined.

**pH:**

12.5.

**Freezing Point:**

Not determined.

**Boiling Point:**

&gt;212°F

**Flash Point:**

124°F.

**Evaporation Rate (BUAC=1):**

Slower.

**Flammability:**

Flammable.

**Flammability or Explosion Limits:****Upper:** 9.4%**Lower:** 1.5%**Vapor Pressure:**

Not determined.

**Specific Gravity:**

0.920

**Solubility in Water:**

Complete.

**Solubility in Other Solvents:**

Not determined.

**Partition Coefficient (n-octanol/water):**

Not determined.

**Auto-ignition Temperature:**

Not determined.

**Decomposition Temperature:**

Not determined.

**Viscosity:**

Not determined.

**Other Information:**

Not determined.

**SECTION 10 – STABILITY AND REACTIVITY****Reactivity:**

No dangerous reaction known under conditions of normal use.

**Chemical Stability:**

Stable under normal temperature conditions and recommended use.

**Possible Hazardous Reactions:**

Not available.

**Conditions to Avoid:**

Sources of ignition. Contact with incompatible materials.

**Incompatible Materials:**

Acids, oxidizing agents, sources of ignition.

**Hazardous Decomposition Products:**

Oxides of carbon and nitrogen, smoke, fumes.

**SECTION 11 – TOXICOLOGICAL INFORMATION****Routes of Exposure:**

Inhalation	Ingestion	Skin	Eye
X		X	X

**Physical, Chemical and Toxicological Effects:**

**Symptoms:** Severe burns to skin and eyes. Toxic if swallowed or skin contact.

**Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure:**

**Sensitization:** Not a skin sensitizer.

**Germ Cell Mutagenicity:** Not classified.

**Carcinogenicity:** No components of this product are listed by NTP, IARC, or OSHA.

**Reproductive Toxicity:** Not classified.

**Specific Target Organ Toxicity:** Not classified.

**Numerical Measures of Toxicity:**

**Product:** Not determined.

**Component:**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Diethylaminoethanol	1300 mg/kg (rat)	1113 mg/kg (rabbit)	5,000 mg/kg (mouse)
Cyclohexylamine	11 mg/kg (rat)	277 mg/kg (rabbit)	7500 mg/kg (rat)

**SECTION 12 – ECOLOGICAL INFORMATION****Ecotoxicity:**

Diethylaminoethanol

Fish: Golden Orfe: LC50 = 100-200 mg/L; 96 hours

Invertebrates: Water flea: EC50 = 183.6 mg/L; 48 hours

Algae: EC50 = 30 mg/L; 72 hours

Cyclohexylamine

Fish: Golden Orfe: LC50 = 44 mg/L; 96 hours

Invertebrates: Water flea: EC50 = 49 mg/L; 24 hours

Algae: EC50 = 20 mg/L; 96 hours

**Persistence and Degradability:** Not expected to persist in the environment.

**Bioaccumulation:** Not expected to bioaccumulate.

**Mobility:** Not available.

**Other Adverse Effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Harmful to aquatic life.

**SECTION 13 – DISPOSAL CONSIDERATIONS****Waste Treatment Methods:**

**Disposal of Wastes:** Dispose of product in accordance with local, state, and federal regulations.

**Contaminated Packaging:** Empty containers should be triple rinsed and taken to an approved waste handling site for recycling or disposal.

**Other Information:** None.

**SECTION 14 – TRANSPORTATION INFORMATION****DOT:**

**UN Number:** UN2920  
**Proper Shipping Name:** Corrosive Liquid, Flammable, n.o.s. (Cyclohexylamine).  
**Hazard Class:** 8,3  
**Packing Group:** II

**SECTION 15 – REGULATORY INFORMATION****US Federal Regulations:**

**TSCA:** All ingredients of this product are listed in the TSCA inventory.  
**SARA 313:** This product contains the following chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and Title 40 CFR 372.

Chemical Name	CAS Number	Percent Weight
None		

**US State Regulations:**

**California:** This product contains the following chemical or chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm: None.

**SECTION 16 – OTHER INFORMATION**

**Issue Date:** March 19, 2003

**Revision Date:** March 25, 2021

Health	Flammability	Reactivity	Personal Protection
3	2	1	G

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate at the time of publication, Momar, Incorporated makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Momar, Incorporated's control; and therefore, users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes; and they assume all risks of their use, handling, and disposal of the product or from the publications or use of, or reliance upon, information contained herein. This information relates only to the product designed herein and does not relate to its use in combination with any other material or in any other process.

# AquaTrol 14750

## Liquid Neutralizing Amine Blend

### Principal Application:

AquaTrol 14750 is a dual neutralizing amine boiler treatment that provides excellent corrosion protection in steam condensate systems. This dual amine package is especially effective in very long steam systems and where early condensation of part of the steam is likely. The amines in 14750 volatilize in the steam and neutralize carbon dioxide and other acidic components thus protecting the lines against corrosive attack. When condensate is returned to the boiler, the amines recycle through the system providing economical treatment. 14750 reduces iron deposition in the boiler by reducing iron pick-up in the condensate system.

### Use Considerations

14750 is designed for use as an adjunct to a Primary AquaTrol Product to provide a complete boiler water treatment program. When operating conditions warrant, 14750 can be used to provide additional neutralization of acidic components and corrosion protection in very long steam and condensate systems, and where inadequate steam distribution or equipment design may cause early condensation of the amines in the system.

### Dosage & Control

Feed a sufficient quantity of 14750 to maintain a pH range of 8.0 to 8.8 in the condensate. Actual product usage over any time period will vary with operating load of the boiler, amount of condensate returned, and chemical composition of the make-up and feedwater. 14750 contains cyclohexylamine and diethylaminoethanol. When applied to steam in a plant operating under FDA guidelines, the usage should not exceed 10 ppm of total amine in the steam. Your AquaTrol Water Specialist will recommend complete program controls and product dosages.

### Feeding

For best results, 14750 should be fed separately into the steam header using a chemical metering pump constructed of suitably resistant materials. Continuous feed is desired and is usually accomplished by electrically connecting the chemical pump in parallel with the boiler operating controls. 14750 can be metered directly from the shipping container or may be diluted to any convenient strength with soft water or cooled condensate. Do not mix directly with other concentrated water treatment products. 14750 must be pre-diluted before mixing with other boiler feedwater treatments in a chemical mixing tank. Continuous agitation should be avoided.

### Typical Properties

pH	12.4
Density	7.6 Pounds Per Gallon
Appearance	Clear Light Amber Liquid
Odor	Pungent Amine

### Handling Storage & Safety

Use normal precautions for chemical handling. Wear appropriate apron, gloves, or other protective clothing. Always wear goggles or face shield for eye protection. Keep out of the reach of children. Avoid contact with eyes, skin, or clothing. Do not swallow. Read container labeling and Safety Data Sheet for more complete information on handling precautions. AquaTrol 14750 is available in 55, 35, 20, and 5-gallon non-returnable containers. Store at room temperature; protect from freezing and extreme heat. Keep container closed when not in use. Use promptly upon opening.

## **SECTION 1 - IDENTIFICATION**

**Product:** AQUATROL® 14760

**Recommended use of the chemical and restrictions on use:**

**Uses:** Steamline treatment.

**List of advices against:** Not available.

**Details of the supplier of the Safety Data Sheet:**

Momar, Inc.  
1830 Ellsworth Industrial Dr.  
Atlanta, Ga. 30318  
404-355-4580  
800-556-3967  
www.momar.com

**Emergency Telephone Number (INFOTRAC):** North America: 1-800-535-5053  
International: 1-352-323-3500

## **SECTION 2 – HAZARD IDENTIFICATION**

<b>Classification:</b>	Flammable Liquids:	3
	Acute Toxicity – Oral:	4
	Acute Toxicity – Dermal:	4
	Acute Toxicity – Inhalation:	4
	Skin Corrosion/Irritation:	1B
	Eye Damage/Irritation:	1
	Toxic to Reproduction:	2

**Signal Word:** Danger.

**Hazard Statements:** Flammable liquid and vapor.  
Harmful if swallowed.  
Harmful in contact with skin.  
Harmful if inhaled.  
Causes severe skin burns and eye damage.  
Causes serious eye damage.  
Suspected of damaging fertility or the unborn child.

**Pictograms:**



**Precautionary Statements:**

**Prevention:** Keep away from heat/sparks/open flames/hot surfaces. – No smoking.  
Keep container tightly closed.  
Ground/Bond container and receiving equipment.  
Use explosion-proof electrical, ventilating, and lighting equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.



Wash hands and all exposed skin thoroughly after handling.  
Do not eat, drink, or smoke when using this product.  
Wear protective gloves, protective clothing, eye protection, and face protection.  
Avoid breathing dust, fumes, gas, mist, vapors, and spray.  
Use only outdoors or in a well-ventilated area.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.

**Response:** If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
In case of fire: Use water spray, CO<sub>2</sub>, foam, or dry chemical to extinguish.  
If swallowed: Call a poison center, doctor, or hospital if you feel unwell. Rinse mouth. Do NOT induce vomiting.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.  
Immediately call a poison center, doctor, or hospital.  
Take off contaminated clothing and wash it before reuse.  
If exposed or concerned: Get medical advice/attention.

**Storage:** Store in a well-ventilated place. Keep cool.  
Store locked up.

**Disposal:** Dispose of contents/container to approved waste disposal plant in accordance with federal, state, and local regulations.

**Other Hazards:** None known.

### **SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Name	CAS Number	Percent Weight
Cyclohexylamine	108-91-8	<15
Diethylaminoethanol	100-37-8	<15
Morpholine	110-91-8	<15

### **SECTION 4 – FIRST AID MEASURES**

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15-20 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Get medical attention immediately.

**Skin Contact:** Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing. Wash clothing and shoes before reuse. Get medical attention immediately.

**Inhalation:** Move victim to fresh air. If not breathing, give artificial respiration. If breathing is

difficult, give oxygen and get immediate medical attention.

**Ingestion:** Get medical attention immediately. Do not induce vomiting. If victim is conscious and alert, give large amounts of water. Discontinue water if victim feels like they may vomit. Never give anything by mouth to an unconscious person. Keep head low in case of vomiting to keep material from entering lungs.

**Most Important Symptoms and Effects:**

**Acute:** Harmful if swallowed or contacts skin. Causes severe skin burns and eye damage.

**Delayed:** Prolonged or repeated skin contact can cause dermatitis or skin destruction.

**Indication of Any Immediate Medical Attention and Special Treatment Needed:** None known.

## **SECTION 5 – FIREFIGHTING MEASURES**

**Extinguishing Media:** Use dry chemical, carbon dioxide, water spray, or alcohol resistant foam.

**Specific Hazards Arising From the Substance or Product:** None.

**Hazardous Combustion Products:** Oxides of carbon and nitrogen, smoke, and fumes.

**Protective Equipment and Precautions for Firefighters:** Wear a self-contained breathing apparatus in pressure- demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

## **SECTION 6 – ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment, and Emergency Procedures:** Avoid contact with skin and eyes. Wear protective clothing.

**Environmental Precautions:** Keep out of sewers and drains. Spills should be diked and absorbed. Discharge into the environment should be avoided.

**Methods and Materials for Containment and Cleaning Up:** Absorb in vermiculite, dry sand, or earth, and place in containers. Collect and reclaim or dispose of in sealed containers in a licensed waste facility. Liquid material may be removed with a vacuum truck. Containers with spillage must be properly labeled with correct contents and hazard symbol.

## **SECTION 7 – HANDLING AND STORAGE**

**Precautions for Safe Handling:** Keep away from ignition sources. Avoid spilling, skin, and eye contact. Wash thoroughly after handling. Use only with adequate ventilation. For industrial or professional use only. Do not cut or weld empty container. KEEP OUT OF REACH OF CHILDREN.

**Conditions for Safe Storage:** Store in a cool dry place. Store container tightly closed. Store separately from sources of ignition.

**Incompatibilities:** Strong acids, oxidizing agents, and ignition sources.

## **SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION**

### **Exposure Limits and Recommendations:**

<b>Chemical Name</b>	<b>OSHA PEL</b>	<b>ACGIH TLV</b>	<b>Other Exposure Limits</b>
Cyclohexylamine	Not listed	10 ppm	10 ppm (NIOSH)
Diethylaminoethanol	10 ppm	2 ppm	100 ppm (NIOSH IDLH)
Morpholine	20 ppm	Not listed	Not listed

**Engineering Controls:**

Normal ventilation.

**Personal Protection Measures:****Respiratory Protection:**

Where adequate ventilation is not available an approved respirator must be worn.

**Skin and Body:**

Chemical apron and gloves. Selection of protective clothing depends on work conditions, potential exposure conditions and may include boots, suits, and other protective items.

**Eye Protection:**

Safety glasses/goggles. Face shield as needed.

**Other Recommendations:**

Eye wash station and shower in close proximity to use are advised.

## **SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance and Odor:**

Clear, very light amber liquid with amine odor.

**Odor Threshold:**

Not determined.

**pH:**

12.5.

**Freezing Point:**

Not determined.

**Boiling Point:**

&gt;212°F

**Flash Point:**

112°F.

**Evaporation Rate (BUAC=1):**

Slower.

**Flammability:**

Flammable.

**Flammability or Explosion Limits:****Upper:** Not determined. **Lower:** Not determined.**Vapor Pressure:**

Not determined.

**Specific Gravity:**

0.873

**Solubility in Water:**

Complete.

**Solubility in Other Solvents:**

Not determined.

**Partition Coefficient (n-octanol/water):**

Not determined.

**Auto-ignition Temperature:**

Not determined.

**Decomposition Temperature:**

Not determined.

**Viscosity:**

Not determined.

**Other Information:**

Not determined.

## **SECTION 10 – STABILITY AND REACTIVITY**

**Reactivity:**

No dangerous reaction known under conditions of normal use.

**Chemical Stability:**

Stable under normal temperature conditions and recommended use.

**Possible Hazardous Reactions:**

Not available.

**Conditions to Avoid:**

Avoid heat, sparks, open flames, and other sources of ignition. Contact with incompatible materials.

**Incompatible Materials:** Strong acids, strong bases, oxidizing agents.  
**Hazardous Decomposition Products:** Oxides of carbon and nitrogen, smoke, fumes.

## **SECTION 11 – TOXICOLOGICAL INFORMATION**

### **Routes of Exposure:**

Inhalation	Ingestion	Skin	Eye
X	X	X	X

### **Physical, Chemical and Toxicological Effects:**

**Symptoms:** Severe burns to skin and eyes. Harmful if swallowed or skin contact.

### **Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure:**

**Sensitization:** Not a skin sensitizer.  
**Germ Cell Mutagenicity:** Not classified.  
**Carcinogenicity:** No components of this product are listed by NTP, IARC, or OSHA.  
**Reproductive Toxicity:** Suspected of damaging fertility or the unborn child.  
**Specific Target Organ Toxicity:** Not classified.

### **Numerical Measures of Toxicity:**

**Product:** Not determined.

### **Component:**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Cyclohexylamine	300 mg/kg (rat)	277 mg/kg (rabbit)	7500 mg/m3 (rat)
Diethylaminoethanol	855 mg/kg (guinea pig)	1,320 mg/kg (rat)	4.6 mg/L (rat)
Morpholine	1,450 mg/kg (rat)	497 mg/kg (rabbit)	Not determined

## **SECTION 12 – ECOLOGICAL INFORMATION**

### **Ecotoxicity:**

#### **Cyclohexylamine**

Fish: *Leuciscus idus*: LC50 = 44 mg/L; 96hr

Invertebrates: *Daphnia magna*: EC50 = 36.3 mg/L; 48hr

Algae: *Selenastrum capricornutum*: EC50 = 29.3 mg/L; 72hr

#### **Diethylaminoethanol**

Fish: LC50 > 100 mg/L; 96hr

Invertebrates: *Daphnia magna*: EC50 = 165 mg/L; 48hr

Algae: EC50 = 62.3 mg/L; 72hr

#### **Morpholine**

Fish: LC50 = 380 mg/L; 96hr

Invertebrates: *Daphnia magna*: EC50 = 48 mg/L; 48hr

Algae: ErC = 28 mg/L; 96hr

**Persistence and Degradability:** Not expected to persist in the environment.

**Bioaccumulation:** Not expected to bioaccumulate.

**Mobility:** Not available.

**Other Adverse Effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

## **SECTION 13 – DISPOSAL CONSIDERATIONS**

**Waste Treatment Methods:**

**Disposal of Wastes:** Dispose of product in accordance with local, state, and federal regulations.

**Contaminated Packaging:** Empty containers should be triple rinsed and taken to an approved waste handling site for recycling or disposal.

**Other Information:** None.

## **SECTION 14 – TRANSPORTATION INFORMATION**

**DOT:**

**UN Number:** UN2920  
**Proper Shipping Name:** Corrosive Liquid, Flammable, n.o.s. (Cyclohexylamine and Morpholine).  
**Hazard Class:** 8,3  
**Packing Group:** II

## **SECTION 15 – REGULATORY INFORMATION**

**US Federal Regulations:**

**TSCA:** All ingredients of this product are listed in the TSCA inventory.  
**SARA 313:** This product contains the following chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and Title 40 CFR 372.

Chemical Name	CAS Number	Percent Weight
None		

**US State Regulations:**

**California:** This product contains the following chemical or chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm: None.

## **SECTION 16 – OTHER INFORMATION**

**Issue Date:** May 9, 2019  
**Revision Date:** July 22, 2021

Health	Flammability	Reactivity	Personal Protection
3	2	1	G

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate at the time of publication, Momar, Incorporated makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Momar, Incorporated's control; and therefore, users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes; and they assume all risks of their use, handling, and disposal of the product or from the publications or use of, or

reliance upon, information contained herein. This information relates only to the product designed herein and does not relate to its use in combination with any other material or in any other process.

# AquaTrol 14760

## Liquid Neutralizing Amine Blend

- Combines three neutralizing amines
- Provides excellent corrosion inhibition
- Reduces iron and copper pick-up
- Authorized by FDA for steam/food contact

### Principal Application:

**14760** is a neutralizing amine blend combined in a ratio that provides excellent corrosion protection in steam condensate systems. This TRIAMINE package is especially effective in steam/condensate systems where cyclohexylamine would be the primary choice of treatment. The amines in **14760** volatilize in the steam and neutralize carbon dioxide and other acidic components thus protecting the lines against corrosive attack. When condensate is returned to the boiler, the amines recycle through the system providing economical treatment. **14760** also reduces iron deposition in the boiler by reducing iron pick-up in the condensate system.

### Use Considerations

**14760** is designed for use as an adjunct to a Primary AquaTrol Product to provide a complete boiler water treatment program. When operating conditions warrant, **14760** can be injected at supplemental points to provide additional neutralization of acidic components and corrosion protection in very long steam and condensate systems, and where inadequate steam distribution or equipment design may cause early condensation of the amines in the system.

### Dosage & Control

Feed a sufficient quantity of **14760** to maintain a pH range of 8.0 to 8.8 in the condensate. Actual product usage over any time period will vary with operating load of the boiler, amount of condensate returned, and chemical composition of the make-up and feed water. **14760** contains cyclohexylamine, morpholine, and diethylaminoethanol. When applied to steam in a plant operating under USDA guidelines, the usage should not exceed 10 ppm of total amine in the steam. Your AquaTrol Water Specialist will recommend complete program controls and product dosages.

### Feeding

For best results, **14760** should be fed into the steam header using a chemical metering pump constructed of suitably resistant materials. Continuous feed is desired and is usually accomplished by electrically connecting the chemical pump in parallel with the boiler operating controls. **14760** can be metered directly from the shipping container or may be diluted to any convenient strength with soft water or cooled condensate. Do not mix directly with other concentrated water treatment products. **14760** must be pre-diluted before mixing with other boiler feed water treatments in a chemical mixing tank. Continuous agitation should be avoided.

### Typical Properties

Appearance:	Pale Amber, Clear Liquid
Odor:	Pungent Amine
pH (neat):	12.4
Density:	8.2 Pounds per Gallon

### Handling Storage & Safety

Use normal precautions for chemical handling. Wear appropriate apron, gloves, or other protective clothing. Always wear goggles or face shield for eye protection. Keep out of the reach of children. Avoid contact with eyes, skin, or clothing. Do not swallow. Read container labeling and Safety Data Sheet for more complete information on handling precautions. AquaTrol **14760** is available in 55-, 35-, 20-, and 5-gallon non-returnable containers. Store at room temperature; protect from freezing and extreme heat. Keep container closed when not in use. Use promptly upon opening.

## **SECTION 1 - IDENTIFICATION**

**Product:** AQUATROL® 14780

**Recommended use of the chemical and restrictions on use:**

**Uses:** Steamline treatment.

**List of advices against:** Not available.

**Details of the supplier of the Safety Data Sheet:**

Momar, Inc.  
1830 Ellsworth Industrial Dr.  
Atlanta, Ga. 30318  
404-355-4580  
800-556-3967  
www.momar.com

**Emergency Telephone Number (INFOTRAC):** North America: 1-800-535-5053  
International: 1-352-323-3500

## **SECTION 2 – HAZARD IDENTIFICATION**

<b>Classification:</b>	Flammable Liquids:	3
	Acute Toxicity - Oral:	2
	Acute Toxicity – Dermal:	3
	Skin Corrosion/Irritation:	1B
	Eye Damage/Irritation:	1
	Toxic to Reproduction:	2

**Signal Word:** Danger.

**Hazard Statements:** Flammable liquid and vapor.  
Fatal if swallowed.  
Toxic in contact with skin.  
Causes severe skin burns and eye damage.  
Causes serious eye damage.  
Suspected of damaging fertility or the unborn child.

**Pictograms:**



**Precautionary Statements:**

**Prevention:** Keep away from heat/sparks/open flames/hot surfaces. – No smoking.  
Keep container tightly closed.  
Ground/Bond container and receiving equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Wash hands and all exposed skin thoroughly after handling.  
Do not eat, drink, or smoke when using this product.



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

Do not breathe dusts or mists.

Use only outdoors or in a well-ventilated area.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

- Response:** If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
- In case of fire: Use water spray, CO<sub>2</sub>, foam, or dry chemical to extinguish.
- If swallowed: Immediately call a poison center/doctor/hospital. Rinse mouth. Do NOT induce vomiting.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If inhaled: Remove person to fresh air and keep comfortable for breathing.
- Call a poison center/doctor/hospital if you feel unwell.
- If exposed or concerned: Get medical advice/attention.
- Storage:** Store locked up.
- Store in a well-ventilated place. Keep cool.
- Disposal:** Dispose of contents/container to approved waste disposal plant in accordance with federal, state, and local regulations.
- Other Hazards:** None known.

### **SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Name	CAS Number	Percent Weight
Cyclohexylamine	108-91-8	10 – 30
Morpholine	110-91-8	10 – 30

### **SECTION 4 – FIRST AID MEASURES**

- Eye Contact:** Immediately flush eyes with plenty of water for at least 15-20 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Get medical attention immediately.
- Skin Contact:** Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing. Wash clothing and shoes before reuse. Get medical attention immediately.
- Inhalation:** Move victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and get immediate medical attention.
- Ingestion:** Get medical attention immediately. Do not induce vomiting. If victim is conscious and alert, give large amounts of water. Discontinue water if victim feels like they may vomit. Never give anything by mouth to an unconscious person. Keep head low in case of vomiting to keep material from entering lungs.

**Most Important Symptoms and Effects:**

- Acute:** Toxic if swallowed or contacts skin. Causes severe skin burns and eye damage.
- Delayed:** Prolonged or repeated skin contact can cause dermatitis or skin destruction.

**Indication of Any Immediate Medical Attention and Special Treatment Needed:** None known.

**SECTION 5 – FIREFIGHTING MEASURES**

**Extinguishing Media:** Use dry chemical, carbon dioxide, water spray, or alcohol resistant foam.

**Specific Hazards Arising From the Substance or Product:** None.

**Hazardous Combustion Products:** Oxides of carbon and nitrogen, smoke, and fumes.

**Protective Equipment and Precautions for Firefighters:** Wear a self-contained breathing apparatus in pressure- demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

**SECTION 6 – ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment, and Emergency Procedures:** Avoid contact with skin and eyes. Wear protective clothing.

**Environmental Precautions:** Keep out of sewers and drains. Spills should be diked and absorbed. Discharge into the environment should be avoided.

**Methods and Materials for Containment and Cleaning Up:** Absorb in vermiculite, dry sand, or earth, and place in containers. Collect and reclaim or dispose of in sealed containers in a licensed waste facility. Liquid material may be removed with a vacuum truck. Containers with spillage must be properly labeled with correct contents and hazard symbol.

**SECTION 7 – HANDLING AND STORAGE**

**Precautions for Safe Handling:** Keep away from ignition sources. Avoid spilling, skin, and eye contact. Wash thoroughly after handling. Use only with adequate ventilation. For industrial or professional use only. Do not cut or weld empty container. KEEP OUT OF REACH OF CHILDREN.

**Conditions for Safe Storage:** Store in a cool dry place. Store container tightly closed. Store separately from sources of ignition.

**Incompatibilities:** Strong acids, oxidizing agents, and ignition sources.

## **SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION**

### **Exposure Limits and Recommendations:**

<b>Chemical Name</b>	<b>OSHA PEL</b>	<b>ACGIH TLV</b>	<b>Other Exposure Limits</b>
Cyclohexylamine	10 ppm	10 ppm	Not listed
Morpholine	20 ppm	20 ppm	20 ppm (NIOSH)

**Engineering Controls:**

Normal ventilation.

**Personal Protection Measures:****Respiratory Protection:**

As needed for vapors and mists. Use NIOSH approved filter for caustic materials.

**Skin and Body:**

Chemical apron and gloves.

**Eye Protection:**

Safety glasses/goggles. Face shield as needed.

**Other Recommendations:**

None.

## **SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance and Odor:**

Clear, pale yellow liquid with amine odor.

**Odor Threshold:**

Not determined.

**pH:**

12.5.

**Freezing Point:**

Not determined.

**Boiling Point:**

&gt;212°F

**Flash Point:**

130°F.

**Evaporation Rate (BUAC=1):**

Slower.

**Flammability:**

Flammable.

**Flammability or Explosion Limits:****Upper:** Not determined.**Lower:** Not determined.**Vapor Pressure:**

Not determined.

**Specific Gravity:**

0.992

**Solubility in Water:**

Complete.

**Solubility in Other Solvents:**

Not determined.

**Partition Coefficient (n-octanol/water):**

Not determined.

**Auto-ignition Temperature:**

Not determined.

**Decomposition Temperature:**

Not determined.

**Viscosity:**

Not determined.

**Other Information:**

Not determined.

## **SECTION 10 – STABILITY AND REACTIVITY**

**Reactivity:**

No dangerous reaction known under conditions of normal use.

**Chemical Stability:**

Stable under normal temperature conditions and recommended use.

**Possible Hazardous Reactions:**

Not available.

**Conditions to Avoid:**

Sources of ignition. Contact with incompatible materials.

**Incompatible Materials:**

Acids, oxidizing agents, sources of ignition.

**Hazardous Decomposition Products:**

Oxides of carbon and nitrogen, smoke, fumes.

## **SECTION 11 – TOXICOLOGICAL INFORMATION**

### **Routes of Exposure:**

Inhalation	Ingestion	Skin	Eye
X	X	X	X

### **Physical, Chemical and Toxicological Effects:**

**Symptoms:** Severe burns to skin and eyes. Toxic if swallowed or skin contact.

### **Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure:**

**Sensitization:** Not a skin sensitizer.

**Germ Cell Mutagenicity:** Not classified.

**Carcinogenicity:** No components of this product are listed by NTP, IARC, or OSHA.

**Reproductive Toxicity:** Not classified.

**Specific Target Organ Toxicity:** Not classified.

### **Numerical Measures of Toxicity:**

**Product:** Not determined.

### **Component:**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Cyclohexylamine	11 mg/kg (rat)	277 mg/kg (rabbit)	7500 mg/kg (rat)
Morpholine	1,450 mg/kg (rat)	500 mg/kg (rabbit)	8,000 ppm;8hr (rat)

## **SECTION 12 – ECOLOGICAL INFORMATION**

### **Ecotoxicity:**

Cyclohexylamine

Fish: Golden Orfe: LC50 = 44 mg/L; 96 hours

Invertebrates: Water flea: EC50 = 49 mg/L; 24 hours

Algae: EC50 = 20 mg/L; 96 hours

Morpholine

Fish: Rainbow trout: LC50 = 180-380 mg/L; 96 hours

Invertebrates: Water flea: EC50 = 100 mg/L; 24 hours

Algae: EC50 = 80 mg/L; 72 hours

**Persistence and Degradability:** Not expected to persist in the environment.

**Bioaccumulation:** Not expected to bioaccumulate.

**Mobility:** Not available.

**Other Adverse Effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

## **SECTION 13 – DISPOSAL CONSIDERATIONS**

### **Waste Treatment Methods:**

**Disposal of Wastes:** Dispose of product in accordance with local, state, and federal regulations.

**Contaminated Packaging:** Empty containers should be triple rinsed and taken to an approved waste handling site for recycling or disposal.

Other Information:

None.

**SECTION 14 – TRANSPORTATION INFORMATION**

DOT:

**UN Number:** UN2920  
**Proper Shipping Name:** Corrosive Liquid, Flammable, n.o.s. (Cyclohexylamine and Morpholine).  
**Hazard Class:** 8,3  
**Packing Group:** II

**SECTION 15 – REGULATORY INFORMATION**

US Federal Regulations:

**TSCA:** All ingredients of this product are listed in the TSCA inventory.  
**SARA 313:** This product contains the following chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and Title 40 CFR 372.

Chemical Name	CAS Number	Percent Weight
None		

US State Regulations:

**California:** This product contains the following chemical or chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm: None.

**SECTION 16 – OTHER INFORMATION****Issue Date:** December 8 , 1999**Revision Date:** March 25, 2021

Health	Flammability	Reactivity	Personal Protection
3	2	1	G

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# AquaTrol 14780

## Liquid Neutralizing Amine Blend

- Combines two neutralizing amines
- Provides excellent corrosion inhibition
- Reduces iron and copper pick-up
- Authorized by FDA for steam/food contact

### Principal Application:

**AquaTrol 14780** is a neutralizing amine blend combined in a ratio that provides excellent corrosion protection in steam condensate systems. This DIAMINE package is especially effective in steam/condensate systems where cyclohexylamine would be the primary choice of treatment. The amines in **14780** volatilize in the steam and neutralize carbon dioxide and other acidic components thus protecting the lines against corrosive attack. When condensate is returned to the boiler, the amines recycle through the system providing economical treatment. **14780** also reduces iron deposition in the boiler by reducing iron pick-up in the condensate system.

### Use Considerations

**14780** is designed for use as an adjunct to a Primary AquaTrol Product to provide a complete boiler water treatment program. When operating conditions warrant, **14780** can be injected at supplemental points to provide additional neutralization of acidic components and corrosion protection in very long steam and condensate systems, and where inadequate steam distribution or equipment design may cause early condensation of the amines in the system.

### Dosage & Control

Feed a sufficient quantity of **14780** to maintain a pH range of 8.0 to 8.8 in the condensate. Actual product usage over any time period will vary with operating load of the boiler, amount of condensate returned, and chemical composition of the make-up and feed water. **14780** contains cyclohexylamine, and morpholine. When applied to steam in a plant operating under USDA guidelines, the usage should not exceed 10 ppm of total amine in the steam. Your AquaTrol Water Specialist will recommend complete program controls and product dosages.

### Feeding

For best results, **14780** should be fed into the steam header using a chemical metering pump constructed of suitably resistant materials. Continuous feed is desired and is usually accomplished by electrically connecting the chemical pump in parallel with the boiler operating controls. **14780** can be metered directly from the shipping container or may be diluted to any convenient strength with soft water or cooled condensate. Do not mix directly with other concentrated water treatment products. **14780** must be pre-diluted before mixing with other boiler feed water treatments in a chemical mixing tank. Continuous agitation should be avoided.

### Typical Properties

Appearance:	Pale Yellow, Clear Liquid
Odor:	Pungent Amine
pH (neat):	12.5
Density:	8.3 Pounds per Gallon

### Handling Storage & Safety

Use normal precautions for chemical handling. Wear appropriate apron, gloves, or other protective clothing. Always wear goggles or face shield for eye protection. Keep out of the reach of children. Avoid contact with eyes, skin, or clothing. Do not swallow. Read container labeling and Safety Data Sheet for more complete information on handling precautions. **AquaTrol 14780** is available in 55-, 35-, 20-, and 5-gallon non-returnable containers. Store at room temperature; protect from freezing and extreme heat. Keep container closed when not in use. Use promptly upon opening.

## **SECTION 1 - IDENTIFICATION**

**Product:** AQUATROL® 14550

**Recommended use of the chemical and restrictions on use:**

**Uses:** Alkalinity Adjunct.

**List of advices against:** Not available.

**Details of the supplier of the Safety Data Sheet:**

Momar, Inc.  
1830 Ellsworth Industrial Dr.  
Atlanta, Ga. 30318  
404-355-4580  
800-556-3967  
www.momar.com

**Emergency Telephone Number (INFOTRAC):** North America: 1-800-535-5053  
International: 1-352-323-3500

## **SECTION 2 – HAZARD IDENTIFICATION**

**Classification:** Oral Toxicity: 3  
Skin Corrosion/Irritation: 1B  
Eye Damage/Irritation: 1

**Signal Word:** Danger.

**Hazard Statements:** Toxic if swallowed.  
Causes severe skin burns and eye damage.  
Causes serious eye damage.

**Pictograms:**



**Precautionary Statements:**

**Prevention:** Wash hands and all exposed skin thoroughly after handling.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Do not breathe dusts or mists.  
Use only outdoors or in a well-ventilated area.  
Do not eat, drink, or smoke when using this product.

**Response:** If swallowed: Immediately call a poison center/doctor/hospital. Rinse mouth. Do NOT induce vomiting.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.  
If in eyes: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.

**Storage:** Store locked up.

**Disposal:** Dispose of contents/container to approved waste disposal plant in accordance with federal, state, and local regulations..

**Other Hazards:** None known.

### **SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Name	CAS Number	Percent Weight
Sodium Hydroxide	1310-73-2	<50%

### **SECTION 4 – FIRST AID MEASURES**

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15-20 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Get medical attention immediately.

**Skin Contact:** Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing. Wash clothing and shoes before reuse. Get medical attention immediately.

**Inhalation:** Get medical attention immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. May be dangerous for rescuer to give artificial respiration.

**Ingestion:** Get medical attention immediately. Do not induce vomiting. If victim is conscious and alert, give large amounts of water. Discontinue water if victim feels like they may vomit. Never give anything by mouth to an unconscious person. Keep head low in case of vomiting to keep material from entering lungs.

**Most Important Symptoms and Effects:**

**Acute:** Toxic if swallowed. Causes severe skin burns and eye damage.

**Delayed:** Prolonged or repeated skin contact can cause dermatitis or skin destruction.

**Indication of Any Immediate Medical Attention and Special Treatment Needed:** None known.

### **SECTION 5 – FIREFIGHTING MEASURES**

**Extinguishing Media:** Product is nonflammable. Use dry chemical, carbon dioxide, water spray, or alcohol resistant foam as appropriate for surrounding fire.

**Specific Hazards Arising From the Substance or Product:** Contact with aluminum and/or galvanized metals will produce flammable hydrogen gas.

**Hazardous Combustion Products:** None known.

**Protective Equipment and Precautions for Firefighters:** Wear a self-contained breathing apparatus in pressure- demand, MSHA/NIOSH (approved or equivalent), and full protective



gear. Additional protective clothing must be worn to prevent personal contact with this material. Those items include but are not limited to: boots, gloves, hard hat, splash proof goggles, full face shield and impervious clothing. Use water with caution and in flooding amounts.

## **SECTION 6 – ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment, and Emergency Procedures:** Avoid contact with skin and eyes. Wear protective clothing.

**Environmental Precautions:** Keep out of sewers and drains without proper permits. Spills should be diked and absorbed. This material is alkaline and may raise the pH of surface waters with low buffering capacity.

**Methods and Materials for Containment and Cleaning Up:** Absorb in vermiculite, dry sand, or earth, and place in containers. Collect and reclaim or dispose of in sealed containers in a licensed waste facility. Liquid material may be removed with a vacuum truck. Containers with spillage must be properly labeled with correct contents and hazard symbol.

## **SECTION 7 – HANDLING AND STORAGE**

**Precautions for Safe Handling:** Avoid spilling, skin, and eye contact. Wash thoroughly after handling. Use only with adequate ventilation. For industrial or professional use only. Do not cut or weld empty container. KEEP OUT OF REACH OF CHILDREN.

**Conditions for Safe Storage:** Store in a cool dry place. Store container tightly closed. Store separately from acids, metals, or combustible materials. Keep from freezing.

**Incompatibilities:** Strong acids, oxidizing agents, metals, organic materials.

## **SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION**

### **Exposure Limits and Recommendations:**

Chemical Name	OSHA PEL	ACGIH TLV	Other Exposure Limits
Sodium Hydroxide	2 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>	Not listed

**Engineering Controls:** Normal ventilation.

### **Personal Protection Measures:**

**Respiratory Protection:** As needed for vapors and mists. Use NIOSH approved filter for caustic materials.

**Skin and Body:** Chemical apron and gloves.

**Eye Protection:** Safety glasses/goggles. Face shield as needed.

**Other Recommendations:** None.

## **SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance and Odor:** Clear, colorless liquid with no odor.

**Odor Threshold:** Not determined.

<b>pH:</b>	14	
<b>Freezing Point:</b>	55°F.	
<b>Boiling Point:</b>	289°F	
<b>Flash Point:</b>	None.	
<b>Evaporation Rate (BUAC=1):</b>	Slower.	
<b>Flammability:</b>	Product is not flammable.	
<b>Flammability or Explosion Limits:</b>	<b>Upper:</b> Not applicable.	<b>Lower:</b> Not applicable.
<b>Vapor Pressure:</b>	13 mmHg.	
<b>Specific Gravity:</b>	1.54	
<b>Solubility in Water:</b>	Complete.	
<b>Solubility in Other Solvents:</b>	Not determined.	
<b>Partition Coefficient (n-octanol/water):</b>	Not determined.	
<b>Auto-ignition Temperature:</b>	Not determined.	
<b>Decomposition Temperature:</b>	Not determined.	
<b>Viscosity:</b>	Not determined.	
<b>Other Information:</b>	Not determined.	

## **SECTION 10 – STABILITY AND REACTIVITY**

<b>Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical Stability:</b>	Stable under normal temperature conditions and recommended use.
<b>Possible Hazardous Reactions:</b>	Not available.
<b>Conditions to Avoid:</b>	Contact with incompatible materials.
<b>Incompatible Materials:</b>	Acids, oxidizing agents, organic materials, metals.
<b>Hazardous Decomposition Products:</b>	None known.

## **SECTION 11 – TOXICOLOGICAL INFORMATION**

### **Routes of Exposure:**

<b>Inhalation</b>	<b>Ingestion</b>	<b>Skin</b>	<b>Eye</b>
<b>X</b>		<b>X</b>	<b>X</b>

### **Physical, Chemical and Toxicological Effects:**

**Symptoms:** Severe burns to skin and eyes.

### **Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure:**

**Sensitization:** Not a skin sensitizer.

**Germ Cell Mutagenicity:** Not classified.

**Carcinogenicity:** No components of this product are listed by NTP, IARC, or OSHA.

**Reproductive Toxicity:** Not classified.

**Specific Target Organ Toxicity:** Not classified.

### **Numerical Measures of Toxicity:**

**Product:** Not determined.

## **SECTION 12 – ECOLOGICAL INFORMATION**

**Ecotoxicity:** Sodium Hydroxide  
Fish: Mosquito Fish LC50 = 125 mg/L; 96 hr.  
Fish: Rainbow Trout LC50 = 45.4 mg/L; 96 hr.  
Daphnia: Daphnia EC50 = 40.38; 48 hr.

**Persistence and Degradability:** Not expected to persist in the environment.

**Bioaccumulation:** Not expected to bioaccumulate.

**Mobility:** Not available.

**Other Adverse Effects:** None known.

## **SECTION 13 – DISPOSAL CONSIDERATIONS**

**Waste Treatment Methods:**

**Disposal of Wastes:** Dispose of product in accordance with local, state, and federal regulations.

**Contaminated Packaging:** Empty containers should be triple rinsed and taken to an approved waste handling site for recycling or disposal.

**Other Information:** None.

## **SECTION 14 – TRANSPORTATION INFORMATION**

**DOT:**

**UN Number:** UN1824

**Proper Shipping Name:** Sodium hydroxide solution.

**Hazard Class:** 8, Corrosive

**Packing Group:** II

## **SECTION 15 – REGULATORY INFORMATION**

**US Federal Regulations:**

**TSCA:** All ingredients of this product are listed in the TSCA inventory.  
All components of the mixture on the TSCA8(b) inventory are designated "active".

**SARA 313:** This product contains the following chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and Title 40 CFR 372.

Chemical Name	CAS Number	Percent Weight
None		

**US State Regulations:**

**California:** This product contains the following chemical or chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm: None.

**SECTION 16 – OTHER INFORMATION**

**Issue Date:** August 20, 2003

**Revision Date:** June 12, 2019

Health	Flammability	Reactivity	Personal Protection
3	0	2	C

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## AquaTrol 14550

### Liquid Cooling Water Treatment

- Provides Corrosion Inhibition
- Supplements Natural Alkalinity
- FDA Approved

#### Principal Application:

**AquaTrol 14550** is an alkaline product that provides economical pH and alkalinity control in boiler water. **14550** supplements natural water alkalinity to assure that proper boiler water operating control parameters are maintained. **14550** is also used to increase hydrate alkalinity in the boiler where the feedwater contains high levels of silica.

#### Use Considerations

**14550** is designed for use as an adjunct to a Primary AquaTrol Product to provide a complete boiler water treatment program. **14550** should be used in all treatment programs when the primary product does not contribute sufficient alkalinity to overcome make-up water deficiencies in natural alkalinity and where supplemental hydrate alkalinity is required to properly remove silica in the boiler. **14550** can also be used as part of a designed chemical program for wet lay-up storage of idle boilers.

#### Dosage & Control

Feed a sufficient quantity of **14550** to maintain a residual of 300-500 ppm of OH (hydroxide) alkalinity (as CaCO<sub>3</sub>) in the boiler water. Actual product usage over any time period will vary with the operating load of the boiler, amount of condensate returned, and chemical composition of the makeup and feedwater. Your AquaTrol Water Specialist will recommend complete program controls and product dosages.

#### Feeding

Proportional feed is desired and is usually accomplished by electrically connecting the chemical pump in parallel with the boiler feedwater pump. Intermittent feed is accomplished with an appropriate timing device. **14550** can be metered directly from the shipping container or may be diluted to any convenient strength with soft water or cooled condensate. Do not mix directly with other boiler feedwater treatment products. **14550** must be pre-diluted before mixing with other boiler feedwater treatments in a chemical mixing tank. Continuous agitation should be avoided.

#### Typical Properties

Appearance	Colorless Clear Liquid
Odor	Odorless
pH (1% solution)	14.0
Density	12.8 Pounds Per Gallon

#### Handling Storage & Safety

**CAUTION — STRONG CAUSTIC SOLUTION CAUSES SEVERE SKIN AND EYE BURNS.** Use normal precautions for chemical handling. Wear appropriate apron, gloves, or other protective clothing. Always wear goggles or face shield for eye protection. Keep out of the reach of children. Avoid contact with eyes, skin, or clothing. Do not swallow. Read container labeling and Material Safety Data Sheet for more complete information on handling precautions. **AquaTrol 14550** is available in 55, 35, 20, and 5 gallon non-returnable containers. Store at room temperature; protect from freezing and extreme heat. Keep container closed when not in use. Use promptly upon opening. Product stored or held for more than one year should be sampled by your AquaTrol Water Specialist. The sample will be completely analyzed for chemical stability and use/disposition instructions returned to the user.

**SECTION 1 - IDENTIFICATION****Product:** AQUATROL® 15305**Recommended use of the chemical and restrictions on use:****Uses:** Reverse Osmosis Anti-Scalant**List of advices against:** Not available.**Details of the supplier of the Safety Data Sheet:**

Momar, Inc.  
1830 Ellsworth Industrial Dr.  
Atlanta, Ga. 30318  
404-355-4580  
800-556-3967  
www.momar.com

**Emergency Telephone Number  
(INFOTRAC):**

North America: 1-800-535-5053

International: 1-352-323-3500

**SECTION 2 – HAZARD IDENTIFICATION**

**Classification:** Corrosive to Metals: 1  
Eye Damage/Irritation: 1

**Signal Word:** Danger.**Hazard Statements:** May be corrosive to metals.  
Causes serious eye damage.**Pictograms:****Precautionary Statements:****Prevention:** Keep only in original container.

Wear eye protection or face protection.

**Response:** Absorb spillage to prevent material damage.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a poison center, doctor, or hospital.

**Storage:** Store in corrosive resistant container with a resistant inner liner.**Disposal:** None.**Other Hazards:** None known.**SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Name	CAS Number	Percent Weight
Polycarboxylic acid	NA	Proprietary
1-Hydroxyethylidene-1,1-diphosphonic acid	2809-21-4	1.0 – 5.0%

## **SECTION 4 – FIRST AID MEASURES**

**Eye Contact:** Immediately flush eyes with plenty of water, remove contact lenses (if easy to do so), and continue to flush for at least 15-20 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Get medical attention immediately. Continue rinsing eyes while in transport.

**Skin Contact:** Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing. Wash clothing and shoes before reuse. Get medical attention.

**Inhalation:** Remove from exposure. If not breathing, give artificial respiration. Get medical attention.

**Ingestion:** Get medical attention immediately. Do not induce vomiting. If victim is conscious and alert, give large amounts of water. Discontinue water if victim feels like they may vomit. Never give anything by mouth to an unconscious person.

**Most Important Symptoms and Effects:**

**Acute:** Severe eye irritation or damage. Possible skin burns. Severe respiratory tract irritation or damage.

**Delayed:** Prolonged or excessive contact with skin could cause damage or dermatitis.

**Indication of Any Immediate Medical Attention and Special Treatment Needed:** None known.

## **SECTION 5 – FIREFIGHTING MEASURES**

**Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.

**Specific Hazards Arising from the Substance or Product:** Avoid contact with spilled material.

**Hazardous Combustion Products:** Oxides of carbon, oxides of nitrogen, smoke, and fumes.

**Protective Equipment and Precautions for Firefighters:** Wear a self-contained breathing apparatus, and full protective gear. Chemical protective clothing may be needed.

## **SECTION 6 – ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment, and Emergency Procedures:** Avoid contact with skin and eyes. Wear protective clothing, see Section 8.

**Environmental Precautions:** Keep out of sewers, drains, and bodies of water. Spills should be diked and absorbed.

**Methods and Materials for Containment and Cleaning Up:** Absorb in vermiculite, dry sand, or earth, and place in containers. Collect and reclaim or dispose of in sealed containers in a licensed waste facility. Containers with spillage must be properly labeled with correct contents and hazard symbol.

## **SECTION 7 – HANDLING AND STORAGE**

**Precautions for Safe Handling:** Avoid spilling, skin, and eye contact. Wash thoroughly after handling. Use only with adequate ventilation. For industrial or

professional use only. Do not cut or weld empty container. KEEP OUT OF REACH OF CHILDREN.

**Conditions for Safe Storage:**

Store in a cool dry place.

**Incompatibilities:**

Oxidizing agents.

## **SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION**

### **Exposure Limits and Recommendations:**

Chemical Name	OSHA PEL	ACGIH TLV	Other Exposure Limits
None Listed			

**Engineering Controls:**

Normal ventilation.

**Personal Protection Measures:**

**Respiratory Protection:**

Normally not needed. If needed, use NIOSH approved full face mask and filter for organic vapor.

**Skin and Body:**

Chemical resistant gloves recommended. Chemical resistant apron, as needed.

**Eye Protection:**

Safety glasses/goggles recommended.

**Other Recommendations:**

None.

## **SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance and Odor:**

Clear pale-yellow liquid with slight, acid-like odor.

**Odor Threshold:**

Not determined.

**pH:**

<2.0

**Freezing Point:**

23°F

**Boiling Point:**

210°F

**Flash Point:**

>200°F

**Evaporation Rate (BUAC=1):**

Slower.

**Flammability:**

Not flammable.

**Flammability or Explosion Limits:**

**Upper:** Not applicable.

**Lower:** Not applicable.

**Vapor Pressure:**

Not determined.

**Specific Gravity:**

1.14 – 1.17

**Solubility in Water:**

Complete.

**Solubility in Other Solvents:**

Not determined.

**Partition Coefficient (n-octanol/water):**

Not determined.

**Auto-ignition Temperature:**

Not determined.

**Decomposition Temperature:**

Not determined.

**Viscosity:**

Not determined.

**Other Information:**

Not determined.

## **SECTION 10 – STABILITY AND REACTIVITY**

**Reactivity:**

No dangerous reaction known under conditions of normal use. Avoid contact with incompatible materials. See list below.



<b>Chemical Stability:</b>	Stable under normal temperature conditions and recommended use.
<b>Possible Hazardous Reactions:</b>	None.
<b>Conditions to Avoid:</b>	Contact with incompatible materials.
<b>Incompatible Materials:</b>	Strong oxidizing agents, strong alkalis, reducing agents, metals.
<b>Hazardous Decomposition Products:</b>	Carbon oxides, nitrogen oxides, oxide of phosphorous, sulfur oxides.

## **SECTION 11 – TOXICOLOGICAL INFORMATION**

### **Routes of Exposure:**

Inhalation	Ingestion	Skin	Eye
		X	X

### **Physical, Chemical and Toxicological Effects:**

**Symptoms:** Irritation and possible damage to skin and eyes. Irritation or damage to respiratory tract.

### **Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure:**

<b>Sensitization:</b>	Not a skin sensitizer.
<b>Germ Cell Mutagenicity:</b>	Not classified.
<b>Carcinogenicity:</b>	No components of this product are listed by NTP, IARC, or OSHA.
<b>Reproductive Toxicity:</b>	Not classified.
<b>Specific Target Organ Toxicity:</b>	Eyes and skin

### **Numerical Measures of Toxicity:**

<b>Product:</b>	Not determined.
<b>Component:</b>	

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
1-Hydroxyethylidene-1,1-diphosphonic acid	2,400 mg/kg (rat)	Not determined	Not determined

## **SECTION 12 – ECOLOGICAL INFORMATION**

<b>Ecotoxicity:</b>	Fish: LC50 >1,000 mg/L, 96h Aquatic Invertebrates: Water flea EC50 >1,000 mg/L, 48h
<b>Persistence and Degradability:</b>	Not readily biodegradable.
<b>Bioaccumulation:</b>	Data are not available.
<b>Mobility:</b>	Data are not available.
<b>Other Adverse Effects:</b>	Data are not available.

## **SECTION 13 – DISPOSAL CONSIDERATIONS**

**Waste Treatment Methods:**

**Disposal of Wastes:** Dispose of product in accordance with local, state, and federal regulations.

**Contaminated Packaging:** Empty containers should be taken to an approved waste handling site for recycling or disposal.

**Other Information:** None.

## **SECTION 14 – TRANSPORTATION INFORMATION**

**DOT:**

**UN Number:** UN3265  
**Proper Shipping Name:** Corrosive liquid, acidic, organic, n.o.s. (Polycarboxylic acids and a phosphonic acid)  
**Hazard Class:** 8, Corrosive  
**Packing Group:** III

## **SECTION 15 – REGULATORY INFORMATION**

**US Federal Regulations:**

**TSCA:** All ingredients of this product are listed in the TSCA inventory.  
**SARA 313:** This product contains the following chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and Title 40 CFR 372.

Chemical Name	CAS Number	Percent Weight
None		

**US State Regulations:**

**California:** This product contains the following chemical or chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm: None.

## **SECTION 16 – OTHER INFORMATION**

**Issue Date:** April 5, 2022  
**Revision Date:** May 15, 2023

Health	Flammability	Reactivity	Personal Protection
2	0	0	D

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate at the time of publication, Momar, Incorporated makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Momar, Incorporated's control; and therefore, users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes; and they assume all risks of their use, handling, and disposal of the product or from the publications or use of, or reliance upon, information contained herein. This information relates only to the product designed herein and does not relate to its use in combination with any other material or in any other process.

# AquaTrol 15305

## Reverse Osmosis Anti-Scalant

- Excellent dispersants for silica scale and alum particles
- Highly effective in a wide variety of feedwaters and pH ranges
- Compatible with polyamide and cellulose acetate RO/NF membranes from all major manufacturers

### Principal Application:

AquaTrol 15305 is a liquid antiscalant and dispersant that offers excellent silica and sulfate scale inhibition and allows increased system recoveries in high silica and sulfate scale feedwaters. This product is formulated with a crystal modification property that distorts inorganic salt crystal growth to reduce system fouling. It provides threshold scale inhibition at low dose rates which allows for economical system operation.

### Use Considerations

15305 product is a proprietary liquid antiscalant/dispersant designed to inhibit scale and disperse colloidal particles in polyamide, cellulose acetate, and membrane separation systems. This formulation is designed for barium sulfate ( $\text{BaSO}_4$ ), calcium sulfate ( $\text{CaSO}_4$ ) and silica ( $\text{SiO}_2$ ) scale inhibition. Your AquaTrol Water Specialist will provide specific product selection and usage information.

### Dosage & Control

The typical dosage range is between 2 to 7 ppm. Like any injected chemical, over or under dosing may cause unnecessary membrane system fouling. Your AquaTrol Water Specialist will recommend complete program controls and product dosages.

### Feeding

For best results, 15305 must be injected downstream of multimedia filters and upstream of cartridge filters. This product is formulated to be injected neat. However, if a dilution is required, use demineralized or RO permeate water. If neither of these is available, softened water may be substituted. The dilution for 15305 should not result in a solution strength of less than 10%. This guideline will protect the effectiveness of the internal bacteriostat which inhibits bacterial growth in the drum and feed tank.

### Typical Properties

pH	3.0 – 4.0
Density	9.5 Pounds Per Gallon
Appearance	Clear, Amber to Pale Yellow Liquid
Odor	Mild Sweet

### Handling Storage & Safety

Use normal precautions for chemical handling. Wear appropriate apron, gloves, or other protective clothing. Always wear goggles or face shield for eye protection. Keep out of the reach of children. Avoid contact with eyes, skin, or clothing. Do not swallow. Read container labeling and Safety Data Sheet for more complete information on handling precautions. AquaTrol 15305 is available in 275, 55, and 5-gallon non-returnable containers. Store at room temperature; protect from freezing and extreme heat. Keep container closed when not in use. Use promptly upon opening.

# B-22b

## SAFETY DATA SHEET



### SECTION 1 – IDENTIFICATION

**Product Identifier:** B-22b

**EPA Pesticide Registration Number:** 72714-1

**Recommended use:** A microbiocidal bactericide, fungicide, algacide, and slimicide.

**Manufactured for:** Aquaserv, Inc.  
570 N. Rivergate Rd.  
Memphis, TN 38109

**24 Hour Emergency Phone:** (901) 525-7701  
**CHEMTREC:** (800) 424-9300

### SECTION 2 – HAZARDS IDENTIFICATION

#### Hazard Classification

GHS classification in accordance with 29 CFR 1910.1200  
Acute Toxicity: Oral, Category 4  
Acute Toxicity: Inhalation (Dusts/Mists), Category 4  
Serious Eye Damage/Eye Irritation: Category 1  
Skin Sensitization: Category 1A  
Specific Target Organ Toxicity (Repeated Exposure): 1  
Acute Aquatic Toxicity: Category 2  
Chronic Aquatic Toxicity: Category 2  
Metal Corrosivity: Category 1

#### Label Elements

##### Pictograms:



#### Signal Word:

**Danger**

#### Hazard Statement(s):

H302 – Harmful if swallowed.  
H332 – Harmful if inhaled.  
H317 – May cause an allergic skin reaction.  
H318 – Causes serious eye damage.  
H372 – Causes damage to organs through prolonged or repeated exposure if inhaled (respiratory tract).  
H401 – Toxic to aquatic life.  
H411 – Toxic to aquatic life with long-lasting effects.  
H290 – May be corrosive to metals.

#### Precautionary Statement(s):

P264 – Wash face, hands and any exposed skin thoroughly after handling.  
P270 – Do not eat, drink or smoke when using this product.  
P261 – Avoid breathing dust/fume/gas/mist/vapors/spray.

P271 – Use only outdoors or in a well-ventilated area.  
P272 – Contaminated work clothing should not be allowed out of the workplace.  
P362 - Take off contaminated clothing and wash before reuse.  
P280 – Wear protective gloves/protective clothing/eye protection/face protection.  
P273 – Avoid release to the environment.

**Response Statement(s):** P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P302+352 – IF ON SKIN: Wash with plenty of soap and water.  
P333+313 – If skin irritation or rash occurs: Get medical advice/attention.  
P301+330+331 – IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P391+P312 – IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
P304+340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P310 – Immediately call a POISON CENTER or doctor/physician.  
P362 – Take off contaminated clothing and wash before reuse.  
P390 – Absorb spillage to prevent material damage.  
P391 – Collect spillage. Hazardous to the aquatic environment.

**Storage Statement(s):** P405 – Store locked up.  
P406 – Store in corrosive resistant container with a resistant inner liner.

**Disposal Statement:** P501 – Dispose of contents/container in accordance with local, regional, national, and international regulations.

**Other hazards:** No data available

### SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CAS No.	% by Wt.
2,2-Dibromo-3-nitrilopropionamide	10222-01-2	19.0 – 21.0
Polyethylene glycol	25322-68-3	50.0 – 60.0
Water	7732-18-5	20.0 - 30.0

### SECTION 4 – FIRST AID MEASURES

#### Description of first aid measures

**General Advice:** First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Eye Contact:** Wash immediately and continuously with flowing water for a minimum of 30 minutes, while holding eyelids apart to ensure flushing of entire surface. If easy to do, remove contact lenses after the first 5

minutes and continue washing. Do not let exposed individual rub eyes. Obtain prompt medical consultation preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

**Skin Contact:** Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. May cause an allergic skin reaction. In case of skin irritation or allergic reactions see a physician. Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly. Suitable emergency safety shower facility should be immediately available.

**Inhalation:** Move person to fresh air. Get medical attention immediately if symptoms occur. If symptoms persist, call poison control center or a physician for treatment advice. If person is not breathing, give artificial respiration. If by mouth to mouth, use rescuer protection (pocket mask etc.). Call an emergency responder or ambulance.

**Ingestion:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Never give anything by mouth to an unconscious person.

**Most important symptoms and effects, both acute and delayed:** Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

**Indication of any immediate medical attention and special treatment needed Notes to physician:** Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. If burn is present, treat as any thermal burn, after decontamination. Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/esophageal control if lavage is done. Probable mucosal damage may contraindicate the use of gastric lavage. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.

## **SECTION 5 – FIRE FIGHTING MEASURES**

**Suitable Extinguishing Media:** Use extinguishing media appropriate to surrounding fire conditions. Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. General purpose synthetic foams (including AFFF type) or protein foams are preferred if available. Alcohol resistant foams (ATC type) may function.

**Unsuitable Extinguishing Media:** Do not use direct water stream. May spread fire.

**Special Firefighting Procedures:** Use self-contained breathing apparatus (SCBA) in pressure demand and full protective gear. Use water spray to cool unopened containers.

**Unusual Fire and Explosive Hazards:** No data available.

### **Special hazards arising from the substance or mixture**

**Hazardous combustion products:** Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Nitrogen oxides. Hydrogen bromide. Carbon monoxide. Carbon dioxide.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated. Residue can burn. Container may rupture from gas generation in a fire situation.

**Special Firefighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. If product becomes contaminated with water, monitor product for heat generation and/or decomposition. Fight fire from protected location or safe distance. Move containers from fire area if this is possible without hazard. Contain fire water run-off if possible. Review the "Accidental Release Measures" and the "Ecological Information" sections of this SDS.

**Special protective equipment for firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes helmet, coat, trousers, boots, and gloves). Avoid contact with this material during firefighting operations. If contact is likely, change to full chemical resistant firefighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

## **SECTION 6 – ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment, and Emergency Procedures:** Ensure adequate ventilation. Evacuate nonessential personnel to safe areas. Keep people away from and upwind of spill/leak. Refer to section 7, Handling, for additional precautionary measures. Only trained and properly protected personnel must be involved in clean-up operations. Ventilate area of leak or spill. Use appropriate safety equipment. Avoiding breathing vapors or mists. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**Environmental Precautions:** Prevent further leakage or spillage if safe to do so. Avoid or prevent product from entering into soil, ditches, drains/sewers, waterways and/or groundwater. See Section 12, Ecological Information.

**Methods and materials for containment and cleaning up:** Contain spilled material if possible. Attempt to neutralize by adding materials such as sodium bisulfite or sodium metabisulfite. Neutralize with approximately 17.2 grams sodium bisulfite ( $\text{NaHSO}_3$ ) or 15.7 grams sodium meta bisulfite ( $\text{Na}_2\text{S}_2\text{O}_5$ ) for every 100 grams biocidal product. Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

## **SECTION 7 - HANDLING AND STORAGE**

**Conditions for Safe Handling:** Keep out of reach of children. Avoid contact with the eyes, skin and clothing. Avoid breathing mists, vapors or aerosols. Avoid prolonged or repeated contact with skin. Do not swallow. Wash thoroughly with soap and water after handling. Use with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Wear protective clothing and equipment as described in Section 8. Exposure Controls and Personal Protection.

**Conditions for Safe Storage:** Store in original container. Keep container tightly closed when not in use in a dry and well-ventilated place. Store locked up. Store away from incompatible material(s).

Storage Stability

Shelf Life: Use within 12 months

Storage Temperature:  $\leq 35^\circ\text{C}$  ( $\leq 95^\circ\text{F}$ )

**SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION**

Control parameters

If exposure limits exist, they are listed below. If no limits are displayed, then no values are applicable.

**Occupational Exposure Limits**

Component	CAS No.	OSHA PEL	ACGIH TLV	NIOSH IDLH
2,2-Dibromo-3-nitropropionamide	10222-01-2	-	-	-
Polyethylene glycol	25322-68-3	-	-	-
Water	7732-18-5	-	-	-

**Engineering Controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

**Personal Protective Equipment**

**Eye/Face Protection:** Chemical safety goggles or face shield with safety glasses are required.

**Hand Protection:** Use gloves chemically resistant to this material: butyl rubber (best Butyl II, 0.7mm), polyethylene, chlorinated polyethylene, ethyl vinyl alcohol laminate ("EVAL"). Other acceptable glove barrier materials include Viton, Neoprene (0.75mm), Polyvinyl chloride ("PVC" or "vinyl"), and/or Nitrile/butadiene rubber ("nitrile" or "NBR" 0.38mm).

**Skin Protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or fully body suit will depend on the task.

**Respiratory Protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

**General Hygiene Considerations:** Avoid contact with eyes, skin or clothing. Eye wash fountains and safety showers in the workplace are strongly recommended. Do not eat, drink, or smoke in areas where chemicals are being stored or handled. Wash thoroughly before handling food or beverages.

**SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	Clear, colorless to amber liquid
Odor	Chlorine/bromine-like
Specific Gravity @ 23°C	1.19 g/cc
Boiling Point	> 70.0 °C (158.0 °F)
Freezing Point	-13 to -4°F (-25 to -20 °C)
Decomposition Temperature	> 70.0 °C (158.0 °F)
Auto-Ignition Temperature	N/A
Flash Point	159 - 165°C



Explosive Limits	N/A
pH	2.0 – 6.7
Solubility in Water	Soluble
Vapor Pressure @ 20°C (68°F)	2266.5 Pa
Vapor Density (Air = 1)	< 1
Percent Volatile	N/D
Evaporation Rate	< 1

N/A = Not Applicable, N/D= Not Determined

NOTE: The physical data presented above represent typical values and should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

## SECTION 10 - STABILITY AND REACTIVITY

**Reactivity:** No reactive hazards known/expected.

**Chemical Stability:** Stable under recommended storage conditions. See Storage, Section 7.

**Possibility of Hazardous Reactions:** Polymerization will not occur. Reacts with water, acids, and bases generating toxic gases, vapors, and fumes. Corrosive to metals.

**Conditions to Avoid:** Exposure to light and/or heat. Avoid temperatures above 70°C (185°F). Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems.

**Incompatible Materials:** Avoid contact with: Strong acids, Strong bases, Strong oxidizing agents, and/or Reducing agents.

**Hazardous Decomposition Products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to carbon dioxide, bromine, cyanogen bromide and/or dibromoacetonitrile.

## SECTION 11 - TOXICOLOGICAL INFORMATION

*Toxicological information appears in this section when such data is available.*

### **Acute Toxicity**

**Acute Oral Toxicity:** Low toxicity if swallowed. Swallowing may result in irritation or burns of the mouth, throat, and gastrointestinal tract. May cause dizziness and drowsiness.

LD50, Rat, 1387 mg/kg

**Acute Dermal Toxicity:** Prolonged skin contact is unlikely to result in absorption of harmful amounts.

LD50, Rat/Rabbit, > 4,000 mg/kg

**Acute Inhalation Toxicity:** Mist may cause irritation of upper respiratory tract (nose and throat).  
LC50, Rat, 4 Hour, dust/mist, 1.05 mg/l

Chemical Name	Oral LD <sub>50</sub>	Dermal LD <sub>50</sub>	Inhalation LC <sub>50</sub>
2,2-Dibromo-3-nitrilo-propionamide (CAS No. 10222-01-2)	167 mg/kg (Female rats)	>2000 mg/kg (Rabbit)	0.32 mg/l (4 hrs., Rat)
Polethylene Glycol (CAS No. 25322-68-3)	22 g/kg (Rat)	>20 g/kg (Rabbit)	

**Skin corrosion/irritation:** Brief contact may cause skin irritation. Symptoms may include pain, severe local redness and tissue damage.

**Serious eye damage/eye irritation:** May cause serious eye damage. May cause pain disproportionate to the level of irritation to eye tissues. May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

**Sensitization:** May cause allergic skin reactions in humans by contact.

**Respiratory Sensitization:** No information available.

**Specific Target Organ Systemic Toxicity (Single Exposure):** The substance or mixture is not classified as specific target organ toxicant, single exposure.

**Specific Target Organ Systemic Toxicity (Repeated Exposure):** Excessive exposure may increase the blood and tissue levels of bromine. Cause damage to respiratory tract through prolonged or repeated exposure. Observations in animals include kidney effects following repeated ingestion of active ingredient, but no evidence of systemic toxicity following repeated dermal exposure at maximum attainable doses.

**Carcinogenicity:** Not carcinogenic. Active ingredient did not cause cancer in laboratory animals.

**Teratogenicity:** Not teratogenic. NOAEL (for fetal toxicity in rabbits was  $\geq 10$  mg/kg/day) for the active ingredient (DBNPA).

**Reproductive toxicity:** The product did not demonstrate reproductive toxicity. In a 2-generation study in rat, the NOEL for reproduction parameters was  $\geq 30$  mg/kg/day for the active ingredient (DBNPA).

**Mutagenicity:** Not mutagenic. Active ingredient was not mutagenic in several in vitro genetic toxicity studies.

**Aspiration Hazard:** Based on physical properties, not expected to occur.

## SECTION 12 - ECOLOGICAL INFORMATION

*Ecotoxicological information appears in this section when such data is available. Ecological data have not been determined specifically for this product. The environmental toxicity data mentioned below are for studies conducted or from published literature on the active ingredient: 2,2-dibromo-3-nitrilopropionamide.*

**Marine pollutant:** Yes

**Ecotoxicity:** Toxic to aquatic life with long lasting effects.

### Acute Toxicity to Fish

Material is toxic to aquatic organisms on an acute basis (LC<sub>50</sub>/EC<sub>50</sub> between 1 and 10 mg/L in the most sensitive species tested).

LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, 3.6 mg/L  
LC50, Cyprinodon variegatus (sheepshead minnow), 96 Hour, 3.4 mg/L  
LC50, Mysidopsis bahia (Mysid shrimp), 48 Hour, 0.72 mg/L

**Acute Toxicity to Aquatic Invertebrates**

EC50, Daphnia magna (Water flea), static test, 48 Hour, 2.5 mg/L

**Acute Toxicity to Algae/Aquatic Plants**

EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate inhibition, 1.5 mg/L

**Chronic Aquatic Toxicity****Chronic Toxicity to Aquatic Invertebrates**

NOEC, Daphnia magna (Water flea), flow-through test, 21 d, 0.06 mg/L

**Persistence and Degradability**

**Biodegradability:** Not readily biodegradable. Hydrolysis rate increases with an increase in either pH or temperature (half life @ pH 7, 65 hours at 25°C).

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3), not expected to bioaccumulate.

**Partition coefficient:** n-octanol/water(log Pow): 0.79 Measured

**Bioconcentration factor (BCF):** 13 Fish Measured

**Mobility in soil**

Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient (Koc): 15 Estimated.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

**Disposal Procedure:** Dispose of waste at an appropriate waste disposal facility according to current applicable federal, state, and local regulations. For product disposal, dispose of at a supervised incineration facility or an appropriate waste disposal facility according to current applicable laws and regulations and product characteristics at time of disposal. As your supplier, we have no control over the management practices or parties handling or using this material. The information presented here pertains only to the product as shipped in its intended condition as described in SDS Section 3, Composition Information.

**SECTION 14 - TRANSPORT INFORMATION****DOT**

<b>UN/ID No.:</b>	UN3265
<b>UN Proper Shipping Name</b>	Corrosive liquid, acidic, organic, n.o.s. (2,2-Dibromo-3-nitrilopropionamide)
<b>Hazard Class:</b>	8
<b>Packing Group:</b>	III
<b>Description:</b>	Corrosive liquid, acidic, organic, n.o.s. (2,2-Dibromo-3-nitrilopropionamide), 8, III
<b>Emergency Response Guide Number</b>	153

**TDG**

<b>UN/ID No.:</b>	UN3265
<b>UN Proper Shipping Name</b>	Corrosive liquid, acidic, organic, n.o.s. (2,2-Dibromo-3-nitrilopropionamide)
<b>Hazard Class:</b>	8
<b>Packing Group:</b>	III
<b>Description:</b>	Corrosive liquid, acidic, organic, n.o.s. (2,2-Dibromo-3-nitrilopropionamide), 8, III

**IMO-IMDG**

<b>UN/ID No.:</b>	UN3265
<b>UN Proper Shipping Name:</b>	Corrosive liquid, acidic, organic, n.o.s. (2,2-Dibromo-3-nitrilopropionamide), Marine pollutant
<b>Hazard Class:</b>	8
<b>Packing Group:</b>	III
<b>EMS-No:</b>	F-A, S-B
<b>Special Precautions:</b>	None
<b>Marine Pollutant:</b>	Yes
<b>Description:</b>	Corrosive liquid, acidic, organic, n.o.s. (2,2-Dibromo-3-nitrilopropionamide), 8, III, Marine pollutant

**ICAO/IATA**

<b>UN/ID No.:</b>	UN3265
<b>UN Proper Shipping Name:</b>	Corrosive liquid, acidic, organic, n.o.s. (2,2-Dibromo-3-nitrilopropionamide)
<b>Hazard Class:</b>	8
<b>Packing Group:</b>	III
<b>Environmental Hazards:</b>	Yes
<b>ERG Code:</b>	8L
<b>Special Precautions:</b>	None
<b>Marine Pollutant:</b>	Yes
<b>Description:</b>	Corrosive liquid, acidic, organic, n.o.s. (2,2-Dibromo-3-nitrilopropionamide), 8, III, Marine pollutant

**SECTION 15 - REGULATORY INFORMATION****US Federal Regulations****U.S. TSCA (Toxic Substances Control Act) – Section 5(a)(2)**

This product does not contain any substances subject to Significant New Use Rules (SNURs).

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40CFR 122.42).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulation**

The following chemicals are listed because of the additional requirements of Pennsylvania and New Jersey law:

<u>Components</u>	<u>CAS No.</u>
2,2-Dibromo-3-nitrilopropionamide	10222-01-2

**International Inventories**

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory (NZIoC)	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
Thailand	Thailand Inventory FDA Existing Chemicals (TECI)	Yes
Vietnam	Vietnam National Chemicals Inventory (NCI)	Yes
U.S.A. & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes
Mexico	National Inventory of Chemical Substances (NSQ)	No

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**U.S. EPA Label Information**

<b>EPA Pesticide Registration Number:</b>	72714-1
<b>EPA Pesticide Label</b>	DANGER
	Corrosive
	Causes irreversible eye damage
	Eye contact may cause loss of vision
	May be fatal if swallowed
	Harmful if inhaled or absorbed through skin
	Causes skin irritation
	Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals
	This product is toxic to fish and aquatic organisms
	Reaction with strong reducing agents may be explosive.
	Avoid misting.

**SECTION 16 – OTHER INFORMATION**

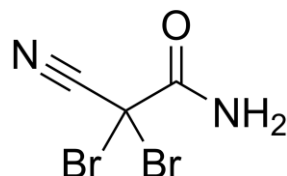
Issue Date: January 8, 2020  
Revision Date: 07/24/2021  
Revision Summary: Section 2 and 14.  
Prepared By: Product Stewardship Team  
Revision Information: N/A

This Safety Data Sheet was prepared to comply with the OSHA Hazard Communication Standard, 29 CFR 1910.1200. Aquaserv provides no warranties; either expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein. The data contained in this Safety Data Sheet reflects the latest information available to us on hazards, properties, and handling of this product under the recommended conditions of use. The information on this Safety Data Sheet relates only to the material as supplied and does not relate to combinations with other materials or processes.



## PRODUCT DATA SHEET

### B-22b



**B-22b** is an EPA registered end-use-product (EUP), containing 20% DBNPA (2,2-Dibromo-3-nitrilopropionamide). It is a fast-acting, broad spectrum antimicrobial product that effectively controls bacteria, fungi, yeast and algae. B-22b is approved for use in the following applications:

- Industrial Recirculating Cooling Water in Industrial Cooling Systems
- Pulp & Paper Mill Systems
- Non-Potable Reverse Osmosis Systems
- Metal Working Fluids Containing Water
- Brewery Pasteurizer Water
- Air-Washer Systems
- Publicly-Owned Treatment Works to Control Coliform and Other Bacteria
- Enhanced Oil Recovery Systems
- Oil Field and Petrochemical Systems
- Fracturing Fluids
- Industrial Preservation Applications
- Equipment Cleaning

#### Key Benefits

- Fast-Acting Antimicrobial Agent
- Broad Spectrum
- Rapidly decomposes
- Easily disperses in water systems.
- Compatible with chlorine
- Completely miscible with water

#### Typical Properties

Appearance.....	Liquid
Color.....	Colorless to dark amber
Active ingredient.....	2,2-dibromo-3-nitrilopropionamide
% Active.....	19.0 – 21.0
% Water.....	28.6 – 30.4
Inert Ingredient(s).....	Polyethylene glycol / water
Water solubility.....	Miscible
pH.....	2.0 – 5.0
Flash point.....	≥ 360°F (≥ 182°C)
Boiling point.....	> 158°F (> 70°C)
Specific gravity.....	1.20 – 1.30 g/mL @ 23°C (73°F)
Vapor pressure.....	18.9 mmHg @ 25°C (77°F)

#### Handling Information

**B-22b** should be used with care and caution. Use in well-ventilated areas. Avoid contact with eyes and skin. Use eye protection (goggles and face shield), gloves and protective clothing when handling the product. Refer to and follow the guidelines in the Safety Data Sheet (SDS) available from Aquaserv for information on the safe use, handling and disposal of this product.

#### Standard Packaging

**B-22b** is available in 5-gallon pails (49 lbs.), 15-gallon drums (156 lbs.), 30-gallon drums (300 lbs.), 55-gallon drums (530 lbs.) and 275-gallon totes (2,650 lbs.).

**SECTION 1 - IDENTIFICATION****Product:** AQUATROL® 15120**Recommended use of the chemical and restrictions on use:****Uses:** Cleaner for Water Treatment Systems**List of advices against:** Not available.**Details of the supplier of the Safety Data Sheet:**

Momar, Inc.  
1830 Ellsworth Industrial Dr.  
Atlanta, Ga. 30318  
404-355-4580  
800-556-3967  
www.momar.com

**Emergency Telephone Number (INFOTRAC):** North America: 1-800-535-5053  
International: 1-352-323-3500

**SECTION 2 – HAZARD IDENTIFICATION**

**Classification:** Eye Damage/Irritation 2A  
Skin Corrosion/Irritation 2

**Signal Word:** Warning.

**Hazard Statements:** Causes serious eye irritation.

Causes skin irritation.

**Pictograms:**

**Precautionary Statements:**

**Prevention:** Wash hands and all exposed skin thoroughly after handling.  
Wear eye protection/face protection. Wear protective gloves.

**Response:** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.  
If on skin: Wash with water / soap.  
If skin irritation occurs: Get medical advice/attention.  
Take off contaminated clothing and wash before reuse.

**Storage:** None.

**Disposal:** Dispose of contents/container to approved waste disposal plant in accordance with federal, state, and local regulations.

**Other Hazards:** None known.



### **SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Name	CAS Number	Percent Weight
Potassium Hydroxide	1310-58-3	<10%
Tetrapotassium pyrophosphate	7320-74-5	<10%

### **SECTION 4 – FIRST AID MEASURES**

- Eye Contact:** Immediately flush eyes with plenty of water, remove contact lenses, and continue to flush for at least 15-20 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Get medical attention immediately.
- Skin Contact:** Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing. Wash clothing and shoes before reuse. Get medical attention if irritation persists.
- Inhalation:** Remove from exposure. If not breathing, give artificial respiration. If breathing is difficult, get medical attention.
- Ingestion:** Get medical attention immediately. Do not induce vomiting. If victim is conscious and alert, give large amounts of water. Discontinue water if victim feels like they may vomit. Never give anything by mouth to an unconscious person.
- Most Important Symptoms and Effects:**
- Acute:** Severe eye irritation.
- Delayed:** Prolonged or excessive contact with skin could cause damage or dermatitis.
- Indication of Any Immediate Medical Attention and Special Treatment Needed:** None known.

### **SECTION 5 – FIREFIGHTING MEASURES**

- Extinguishing Media:** Use media appropriate to the surrounding fire.
- Specific Hazards Arising From the Substance or Product:** None
- Hazardous Combustion Products:** Oxides of carbon and phosphorus.

**Protective Equipment and Precautions for Firefighters:** Wear a self-contained breathing apparatus in pressure- demand mode, and full protective gear.

### **SECTION 6 – ACCIDENTAL RELEASE MEASURES**

- Personal Precautions, Protective Equipment, and Emergency Procedures:** Avoid contact with skin and eyes. Wear protective clothing, see Section 8.
- Environmental Precautions:** Keep out of sewers, drains, and bodies of water. Spills should be diked and absorbed.

**Methods and Materials for Containment and Cleaning Up:** Absorb in vermiculite, dry sand, or earth, and place in containers. Collect and reclaim or dispose of in sealed containers in a licensed waste facility. Liquid material may be removed with vacuum collection. Containers with spillage must be properly labeled with correct contents and hazard symbol.

## **SECTION 7 – HANDLING AND STORAGE**

**Precautions for Safe Handling:** Avoid spilling, skin, and eye contact. Wash thoroughly after handling. Use only with adequate ventilation. For industrial or professional use only. Do not cut or weld empty container. KEEP OUT OF REACH OF CHILDREN.

**Conditions for Safe Storage:** Store in a cool dry place.

**Incompatibilities:** Strong oxidizing agents and reactive metals.

## **SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION**

### **Exposure Limits and Recommendations:**

Chemical Name	OSHA PEL	ACGIH TLV	Other Exposure Limits
Potassium Hydroxide	2 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>	
Tetrapotassium pyrophosphate	Not listed	Not listed	Not listed

**Engineering Controls:** Normal ventilation.

### **Personal Protection Measures:**

**Respiratory Protection:** Normally not needed. If needed, use NIOSH approved mask and filter for organic vapor.

**Skin and Body:** Chemical resistant gloves recommended. Chemical resistant apron, as needed.

**Eye Protection:** Safety glasses/goggles recommended.

**Other Recommendations:** None.

## **SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance and Odor:** Clear, brown liquid with no odor.

**Odor Threshold:** Not determined.

**pH:** 13.0 – 14.0

**Freezing Point:** Not determined.

**Boiling Point:** >212°F

**Flash Point:** No flash at boiling.

**Evaporation Rate (BUAC=1):** Slower.

**Flammability:** Not flammable.

**Flammability or Explosion Limits:** **Upper:** Not applicable. **Lower:** Not applicable.

**Vapor Pressure:** Not determined.

**Specific Gravity:** 1.125

**Solubility in Water:** Complete.

**Solubility in Other Solvents:** Not determined.

**Partition Coefficient (n-octanol/water):** Not determined.

**Auto-ignition Temperature:** Not determined.

**Decomposition Temperature:** Not determined.

**Viscosity:** Not determined.

**Other Information:** Not determined.

## **SECTION 10 – STABILITY AND REACTIVITY**

<b>Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical Stability:</b>	Stable under normal temperature conditions and recommended use.
<b>Possible Hazardous Reactions:</b>	Reaction with food sugars may form Carbon Monoxide.
<b>Conditions to Avoid:</b>	Contact with incompatible materials.
<b>Incompatible Materials:</b>	Strong oxidizing agents and reactive metals.
<b>Hazardous Decomposition Products:</b>	Oxides of carbon and phosphorus.

## **SECTION 11 – TOXICOLOGICAL INFORMATION**

### **Routes of Exposure:**

Inhalation	Ingestion	Skin	Eye
		X	X

### **Physical, Chemical and Toxicological Effects:**

**Symptoms:** Irritation to skin and eyes.

### **Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure:**

<b>Sensitization:</b>	Not a skin sensitizer.
<b>Germ Cell Mutagenicity:</b>	Not classified.
<b>Carcinogenicity:</b>	No components of this product are listed by NTP, IARC, or OSHA.
<b>Reproductive Toxicity:</b>	Not classified.
<b>Specific Target Organ Toxicity:</b>	Eyes

### **Numerical Measures of Toxicity:**

<b>Product:</b>	Not determined.
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### **Component:**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Potassium Hydroxide	333 mg/kg (rat)	Not determined	Not determined

## **SECTION 12 – ECOLOGICAL INFORMATION**

<b>Ecotoxicity:</b>	Potassium Hydroxide Fish: Mosquito Fish LC50 = 80 mg/L; 96 hr.
<b>Persistence and Degradability:</b>	Not expected to persist in the environment.
<b>Bioaccumulation:</b>	Not expect to be a bioaccumulator.
<b>Mobility:</b>	Not expected to have mobility.
<b>Other Adverse Effects:</b>	This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## **SECTION 13 – DISPOSAL CONSIDERATIONS**

**Waste Treatment Methods:**

**Disposal of Wastes:** Dispose of product in accordance with local, state, and federal regulations.

**Contaminated Packaging:** Empty containers should be taken to an approved waste handling site for recycling or disposal.

**Other Information:** None.

## **SECTION 14 – TRANSPORTATION INFORMATION**

**DOT:**

**UN Number:** UN 1814  
**Proper Shipping Name:** Potassium Hydroxide Solution  
**Hazard Class:** 8, Corrosive  
**Packing Group:** III

## **SECTION 15 – REGULATORY INFORMATION**

**US Federal Regulations:**

**TSCA:** All ingredients of this product are listed in the TSCA inventory.  
**SARA 313:** This product contains the following chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and Title 40 CFR 372.

Chemical Name	CAS Number	Percent Weight

**US State Regulations:**

**California:** This product contains the following chemical or chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm: None.

## **SECTION 16 – OTHER INFORMATION**

**Issue Date:** February 5, 1999

**Revision Date:** March 14, 2018

Health	Flammability	Reactivity	Personal Protection
2	0	0	C

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate at the time of publication, Momar, Incorporated makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Momar, Incorporated's control; and therefore, users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes; and they assume all risks of their use, handling, and disposal of the product or from the publications or use of, or reliance upon, information contained herein. This information relates only to the product designed herein and does not relate to its use in combination with any other material or in any other process.

# AquaTrol 15120

## Liquid Cooling Water Treatment

- Removes Dirt, Silt and Mill Scale
- Prepares New Systems for Use
- Cleans Heat Transfer Surfaces

### Principal Application:

AquaTrol 15120 is a strong alkaline cleaner for removing dirt, silt, mill scale, oil residue and other construction debris from new or fouled recirculating systems. A unique blend of powerful dispersants, lignin and penetrants enables 15120 to disperse and carry away a wide variety of inorganic particulates without the use of corrosive acids.

### Use Considerations

15120 is designed as an alkaline pretreatment for preparing new recirculating water systems for use. When operating conditions warrant, 15120 may also be used for cleaning heavy loads of dirt, silt, or other debris out of existing systems in order to relieve congestion and restore heat transfer efficiency.

### Dosage & Control

The quantity of 15120 required to completely clean any particular system will depend upon the size of the system, the composition and quantity of the fouling, and other factors. As a general rule, start with 5 – 10 gallons of 15120 per 1000 gallons of system water. To remove oils from the system, the recirculating water pH must be 10 to 11.

### Feeding

When cleaning a closed recirculating system, the system need not be taken out of service. Add an appropriate quantity of 15120 through a by-pass feeder or other suitable application point. Once the system is clean, it should be flushed thoroughly until the discharged water pH is lower than 9.0 pH, then it should be treated with the proper AquaTrol Closed System Treatment. When cleaning an open recirculating system, the system need not be taken out of service. Close off all bleed-off lines and add 15120 directly to the sump. When cleaning is complete, open the bleed-off lines completely to allow the spent solution to leave the system. Spent cleaning solution may normally be drained directly to the sanitary sewer or waste line.

### Typical Properties

Appearance:	Dark Brown Liquid
Odor:	Mild Organic
pH:	13.5
Density:	9.4 pounds per gallon

### Handling Storage & Safety

Use normal precautions for chemical handling. Wear appropriate apron, gloves, or other protective clothing. Always wear goggles or face shield for eye protection. Keep out of the reach of children. Avoid contact with eyes, skin, or clothing. Do not swallow. Read container labeling and Material Safety Data Sheet for more complete information on handling precautions. AquaTrol 15120 is available in 55-, 20-, and 5-gallon non-returnable containers. Store at room temperature; protect from freezing and extreme heat. Keep container closed when not in use.

## **SECTION 1 - IDENTIFICATION**

**Product:** AQUATROL® 15150

**Recommended use of the chemical and restrictions on use:**

**Uses:** Cooling Tower Cleaner

**List of advices against:** Not available.

**Details of the supplier of the Safety Data Sheet:**

Momar, Inc.  
1830 Ellsworth Industrial Dr.  
Atlanta, Ga. 30318  
404-355-4580  
800-556-3967  
www.momar.com

**Emergency Telephone Number (INFOTRAC):** North America: 1-800-535-5053  
International: 1-352-323-3500

## **SECTION 2 – HAZARD IDENTIFICATION**

**Classification:**

Oxidizing Liquids:	1
Oral Toxicity:	4
Skin Corrosion/Irritation:	1A
Eye Damage/Irritation:	1
Acute Toxicity, Inhalation	4

**Signal Word:** Danger.

**Hazard Statements:** May cause fire or explosion; strong oxidizer.  
Harmful if swallowed.  
Causes severe skin burns and eye damage.  
Causes serious eye damage.  
Harmful if inhaled

**Pictograms:**



**Precautionary Statements:**

**Prevention:** Keep away from heat.  
Keep/Store away from clothing and other combustible materials.  
Take any precaution to avoid mixing with combustibles/copper or copper alloys/powdered metals/iron and iron salts.  
Wear fire/flame resistant/retardant clothing.  
Wash hands and all exposed skin thoroughly after handling.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Do not breathe fume/mist/vapors/spray.

**Response:** Use only outdoors or in a well-ventilated area.  
Do not eat, drink, or smoke when using this product.  
If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.  
In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.  
In case of fire: Use water spray, foam, dry chemical, or carbon dioxide to extinguish.  
If swallowed: Call a poison center/doctor/hospital if you feel unwell. Rinse mouth. Do NOT induce vomiting.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
Wash contaminated clothing before reuse.  
Immediately call a poison center/doctor/hospital.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.

**Storage:** Store locked up.

**Disposal:** Dispose of contents/container to approved waste disposal plant in accordance with federal, state, and local regulations.

**Other Hazards:** None known.

### **SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Name	CAS Number	Percent Weight
Hydrogen Peroxide	7722-84-1	30-60*

\* Below hydrogen peroxide concentration limits established by 6 CFR Part 27 of the DHS Chemical Facility Anti-Terrorism Standards.

### **SECTION 4 – FIRST AID MEASURES**

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15-20 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Get medical attention immediately. Continue to rinse eyes during transport to hospital.

**Skin Contact:** Remove contaminated clothing. Immediately wash skin with plenty of soap and water for at least 15 minutes. Wash clothing and shoes before reuse. Get medical attention.

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:** Get medical attention immediately. Do not induce vomiting. If victim is conscious and alert, give 2 glasses of water. Discontinue water if victim feels like they may vomit. Never give anything by mouth to an unconscious person. Keep head low in case of vomiting to keep material from entering lungs.

**Most Important Symptoms and Effects:**

**Acute:** Harmful if swallowed. Causes severe skin burns and eye damage.

**Delayed:** Prolonged or repeated skin contact can cause dermatitis or skin destruction.

**Indication of Any Immediate Medical Attention and Special Treatment Needed:**

Hydrogen peroxide at these concentrations is a strong oxidant. Direct contact with the eye is likely to cause corneal damage especially if not washed immediately. Careful ophthalmologic evaluation is recommended and the possibility of local corticosteroid therapy should be considered. Because of the likelihood of corrosive effects on the gastrointestinal tract after ingestion, and the unlikelihood of systemic effects, attempts at evacuating the stomach via emesis induction or gastric lavage should be avoided. There is a remote possibility, however, that a nasogastric or orogastric tube may be required for the reduction of severe distension due to gas formation.

## **SECTION 5 – FIREFIGHTING MEASURES**

**Extinguishing Media:** Product is nonflammable. Use water spray and fog.

**Specific Hazards Arising From the Substance or Product:** Contact with combustible materials may cause or intensify fire.

**Hazardous Combustion Products:** On decomposition, product releases oxygen which may intensify fire.

**Protective Equipment and Precautions for Firefighters:** Wear a self-contained breathing apparatus in pressure- demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Additional protective clothing may be needed to prevent personal contact with this material.

If clothing or equipment is suspected to have come in contact with product, rinse with large amounts of water to ensure all product is removed.

## **SECTION 6 – ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment, and Emergency Procedures:** Avoid contact with skin and eyes. Wear protective clothing. See Section 8. Eliminate all sources of ignition and remove combustible materials

**Environmental Precautions:** Keep out of sewers and drains. Spills should be diked and contained.

**Methods and Materials for Containment and Cleaning Up:** For small spills, dilute with flooding amounts of water and hold in a contained area until H<sub>2</sub>O<sub>2</sub> decomposes. After dilution to about 5%, sodium metabisulfite can be added to speed decomposition.

## **SECTION 7 – HANDLING AND STORAGE**

**Precautions for Safe Handling:** Avoid spilling, skin, and eye contact. Wash thoroughly after handling. Use only with adequate ventilation. For industrial or professional use only. Do not cut or weld empty container. KEEP OUT OF REACH OF CHILDREN.



**Conditions for Safe Storage:** Store in a cool dry place. Store container tightly closed. Store separately from metals, or combustible materials.

**Incompatibilities:** Combustibles, copper or copper alloys, powdered metals, iron and iron salts.

## **SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION**

### **Exposure Limits and Recommendations:**

Chemical Name	OSHA PEL	ACGIH TLV	Other Exposure Limits
Hydrogen peroxide	1 ppm	1 ppm	Not listed

**Engineering Controls:** Normal ventilation.

**Personal Protection Measures:**

**Respiratory Protection:** Not normally needed. If needed, use NIOSH approved full face air supplied respirator. Product may damage cartridge type respirators and limit their usefulness.

**Skin and Body:** Chemical apron and gloves.

**Eye Protection:** Safety glasses/goggles and face shield.

**Other Recommendations:** Wash all safety equipment with water after coming in contact with product. Inspect equipment before reuse for damage.

## **SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance and Odor:** Clear colorless liquid with pungent odor.

**Odor Threshold:** Not determined.

**pH:** 3.

**Freezing Point:** -62°F

**Boiling Point:** 237°F

**Flash Point:** None.

**Evaporation Rate (BUAC=1):** Slower.

**Flammability:** Product is not flammable.

**Flammability or Explosion Limits:** **Upper:** Not applicable. **Lower:** Not applicable.

**Vapor Pressure:** Not determined.

**Specific Gravity:** 1.1 - 1.2

**Solubility in Water:** Complete.

**Solubility in Other Solvents:** Not determined.

**Partition Coefficient (n-octanol/water):** Not determined.

**Auto-ignition Temperature:** Not determined.

**Decomposition Temperature:** Not determined.

**Viscosity:** Not determined.

**Other Information:** Not determined.

## **SECTION 10 – STABILITY AND REACTIVITY**

**Reactivity:** No dangerous reaction known under conditions of normal use.

**Chemical Stability:** Stable under normal temperature conditions and recommended use.

**Possible Hazardous Reactions:** Not available.  
**Conditions to Avoid:** Contact with incompatible materials.  
**Incompatible Materials:** Combustibles, copper or copper alloys, powdered metals, iron and iron salts.  
**Hazardous Decomposition Products:** On decomposition, product releases oxygen which may intensify fire.

## **SECTION 11 – TOXICOLOGICAL INFORMATION**

### **Routes of Exposure:**

Inhalation	Ingestion	Skin	Eye
X	X	X	X

### **Physical, Chemical and Toxicological Effects:**

**Symptoms:** Severe burns to skin and eyes. Harmful if inhaled or ingested. May cause burns to respiratory tract and mucous membranes.

### **Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure:**

**Sensitization:** Not a skin sensitizer.  
**Germ Cell Mutagenicity:** Not classified.  
**Carcinogenicity:** IARC Group 3 - Not classifiable as to its carcinogenicity to humans  
No components of this product are listed by NTP, or OSHA.  
**Reproductive Toxicity:** Not classified.  
**Specific Target Organ Toxicity:** Not classified.

### **Numerical Measures of Toxicity:**

**Product:** Not determined.

### **Component:**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Hydrogen Peroxide	225 mg/kg (rat) (50% solution)	9200 mg/kg (rabbit) (70% solution)	>170 mg/kg - 4 hrs (rat) (50% solution)

## **SECTION 12 – ECOLOGICAL INFORMATION**

**Ecotoxicity:** Not expected to have significant environmental effects.  
**Persistence and Degradability:** Not expected to persist in the environment.  
**Bioaccumulation:** Not expected to bioaccumulate.  
**Mobility:** Not available.  
**Other Adverse Effects:** This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## **SECTION 13 – DISPOSAL CONSIDERATIONS**

**Waste Treatment Methods:**

**Disposal of Wastes:** Dispose of product in accordance with local, state, and federal regulations.

**Contaminated Packaging:** Empty containers should be triple rinsed and taken to an approved waste handling site for recycling or disposal.

**Other Information:** None.

## **SECTION 14 – TRANSPORTATION INFORMATION**

**DOT:**

**UN Number:** UN2014  
**Proper Shipping Name:** Hydrogen Peroxide Aqueous Solution.  
**Hazard Class:** 5.1, 8  
**Packing Group:** II

## **SECTION 15 – REGULATORY INFORMATION**

**US Federal Regulations:**

**TSCA:** All ingredients of this product are listed in the TSCA inventory.

**SARA 313:** This product contains the following chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and Title 40 CFR 372.

Chemical Name	CAS Number	Percent Weight
None		

**US State Regulations:**

**California:** This product contains the following chemical or chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm: None.

## **SECTION 16 – OTHER INFORMATION**

**Issue Date:** June 10, 2003

**Revision Date:** April 13, 2023

Health	Flammability	Reactivity	Personal Protection
3	0	1	D

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate at the time of publication, Momar, Incorporated makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Momar, Incorporated's control; and therefore, users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes; and they assume all risks of their use, handling, and disposal of the product or from the publications or use of, or reliance upon, information contained herein. This information relates only to the product designed herein and does not relate to its use in combination with any other material or in any other process.

## **SECTION 1 - IDENTIFICATION**

**Product:** AQUATROL® 15150

**Recommended use of the chemical and restrictions on use:**

**Uses:** Cooling Tower Cleaner

**List of advices against:** Not available.

**Details of the supplier of the Safety Data Sheet:**

Momar, Inc.  
1830 Ellsworth Industrial Dr.  
Atlanta, Ga. 30318  
404-355-4580  
800-556-3967  
www.momar.com

**Emergency Telephone Number (INFOTRAC):** North America: 1-800-535-5053  
International: 1-352-323-3500

## **SECTION 2 – HAZARD IDENTIFICATION**

**Classification:**

Oxidizing Liquids:	1
Oral Toxicity:	4
Skin Corrosion/Irritation:	1A
Eye Damage/Irritation:	1
Acute Toxicity, Inhalation	4

**Signal Word:** Danger.

**Hazard Statements:** May cause fire or explosion; strong oxidizer.  
Harmful if swallowed.  
Causes severe skin burns and eye damage.  
Causes serious eye damage.  
Harmful if inhaled

**Pictograms:**



**Precautionary Statements:**

**Prevention:** Keep away from heat.  
Keep/Store away from clothing and other combustible materials.  
Take any precaution to avoid mixing with combustibles/copper or copper alloys/powdered metals/iron and iron salts.  
Wear fire/flame resistant/retardant clothing.  
Wash hands and all exposed skin thoroughly after handling.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Do not breathe fume/mist/vapors/spray.

**Response:** Use only outdoors or in a well-ventilated area.  
Do not eat, drink, or smoke when using this product.  
If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.  
In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.  
In case of fire: Use water spray, foam, dry chemical, or carbon dioxide to extinguish.  
If swallowed: Call a poison center/doctor/hospital if you feel unwell. Rinse mouth. Do NOT induce vomiting.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
Wash contaminated clothing before reuse.  
Immediately call a poison center/doctor/hospital.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.

**Storage:** Store locked up.

**Disposal:** Dispose of contents/container to approved waste disposal plant in accordance with federal, state, and local regulations.

**Other Hazards:** None known.

### **SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Name	CAS Number	Percent Weight
Hydrogen Peroxide	7722-84-1	30-60*

\* Below hydrogen peroxide concentration limits established by 6 CFR Part 27 of the DHS Chemical Facility Anti-Terrorism Standards.

### **SECTION 4 – FIRST AID MEASURES**

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15-20 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Get medical attention immediately. Continue to rinse eyes during transport to hospital.

**Skin Contact:** Remove contaminated clothing. Immediately wash skin with plenty of soap and water for at least 15 minutes. Wash clothing and shoes before reuse. Get medical attention.

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:** Get medical attention immediately. Do not induce vomiting. If victim is conscious and alert, give 2 glasses of water. Discontinue water if victim feels like they may vomit. Never give anything by mouth to an unconscious person. Keep head low in case of vomiting to keep material from entering lungs.

**Most Important Symptoms and Effects:**

**Acute:** Harmful if swallowed. Causes severe skin burns and eye damage.

**Delayed:** Prolonged or repeated skin contact can cause dermatitis or skin destruction.

**Indication of Any Immediate Medical Attention and Special Treatment Needed:**

Hydrogen peroxide at these concentrations is a strong oxidant. Direct contact with the eye is likely to cause corneal damage especially if not washed immediately. Careful ophthalmologic evaluation is recommended and the possibility of local corticosteroid therapy should be considered. Because of the likelihood of corrosive effects on the gastrointestinal tract after ingestion, and the unlikelihood of systemic effects, attempts at evacuating the stomach via emesis induction or gastric lavage should be avoided. There is a remote possibility, however, that a nasogastric or orogastric tube may be required for the reduction of severe distension due to gas formation.

## **SECTION 5 – FIREFIGHTING MEASURES**

**Extinguishing Media:** Product is nonflammable. Use water spray and fog.

**Specific Hazards Arising From the Substance or Product:** Contact with combustible materials may cause or intensify fire.

**Hazardous Combustion Products:** On decomposition, product releases oxygen which may intensify fire.

**Protective Equipment and Precautions for Firefighters:** Wear a self-contained breathing apparatus in pressure- demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Additional protective clothing may be needed to prevent personal contact with this material.

If clothing or equipment is suspected to have come in contact with product, rinse with large amounts of water to ensure all product is removed.

## **SECTION 6 – ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment, and Emergency Procedures:** Avoid contact with skin and eyes. Wear protective clothing. See Section 8. Eliminate all sources of ignition and remove combustible materials

**Environmental Precautions:** Keep out of sewers and drains. Spills should be diked and contained.

**Methods and Materials for Containment and Cleaning Up:** For small spills, dilute with flooding amounts of water and hold in a contained area until H<sub>2</sub>O<sub>2</sub> decomposes. After dilution to about 5%, sodium metabisulfite can be added to speed decomposition.

## **SECTION 7 – HANDLING AND STORAGE**

**Precautions for Safe Handling:** Avoid spilling, skin, and eye contact. Wash thoroughly after handling. Use only with adequate ventilation. For industrial or professional use only. Do not cut or weld empty container. KEEP OUT OF REACH OF CHILDREN.

**Conditions for Safe Storage:** Store in a cool dry place. Store container tightly closed. Store separately from metals, or combustible materials.

**Incompatibilities:** Combustibles, copper or copper alloys, powdered metals, iron and iron salts.

## **SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION**

### **Exposure Limits and Recommendations:**

Chemical Name	OSHA PEL	ACGIH TLV	Other Exposure Limits
Hydrogen peroxide	1 ppm	1 ppm	Not listed

**Engineering Controls:** Normal ventilation.

**Personal Protection Measures:**

**Respiratory Protection:** Not normally needed. If needed, use NIOSH approved full face air supplied respirator. Product may damage cartridge type respirators and limit their usefulness.

**Skin and Body:** Chemical apron and gloves.

**Eye Protection:** Safety glasses/goggles and face shield.

**Other Recommendations:** Wash all safety equipment with water after coming in contact with product. Inspect equipment before reuse for damage.

## **SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance and Odor:** Clear colorless liquid with pungent odor.

**Odor Threshold:** Not determined.

**pH:** 3.

**Freezing Point:** -62°F

**Boiling Point:** 237°F

**Flash Point:** None.

**Evaporation Rate (BUAC=1):** Slower.

**Flammability:** Product is not flammable.

**Flammability or Explosion Limits:** **Upper:** Not applicable. **Lower:** Not applicable.

**Vapor Pressure:** Not determined.

**Specific Gravity:** 1.1 - 1.2

**Solubility in Water:** Complete.

**Solubility in Other Solvents:** Not determined.

**Partition Coefficient (n-octanol/water):** Not determined.

**Auto-ignition Temperature:** Not determined.

**Decomposition Temperature:** Not determined.

**Viscosity:** Not determined.

**Other Information:** Not determined.

## **SECTION 10 – STABILITY AND REACTIVITY**

**Reactivity:** No dangerous reaction known under conditions of normal use.

**Chemical Stability:** Stable under normal temperature conditions and recommended use.

**Possible Hazardous Reactions:** Not available.  
**Conditions to Avoid:** Contact with incompatible materials.  
**Incompatible Materials:** Combustibles, copper or copper alloys, powdered metals, iron and iron salts.  
**Hazardous Decomposition Products:** On decomposition, product releases oxygen which may intensify fire.

## **SECTION 11 – TOXICOLOGICAL INFORMATION**

### **Routes of Exposure:**

Inhalation	Ingestion	Skin	Eye
X	X	X	X

### **Physical, Chemical and Toxicological Effects:**

**Symptoms:** Severe burns to skin and eyes. Harmful if inhaled or ingested. May cause burns to respiratory tract and mucous membranes.

### **Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure:**

**Sensitization:** Not a skin sensitizer.  
**Germ Cell Mutagenicity:** Not classified.  
**Carcinogenicity:** IARC Group 3 - Not classifiable as to its carcinogenicity to humans  
No components of this product are listed by NTP, or OSHA.  
**Reproductive Toxicity:** Not classified.  
**Specific Target Organ Toxicity:** Not classified.

### **Numerical Measures of Toxicity:**

**Product:** Not determined.

### **Component:**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Hydrogen Peroxide	225 mg/kg (rat) (50% solution)	9200 mg/kg (rabbit) (70% solution)	>170 mg/kg - 4 hrs (rat) (50% solution)

## **SECTION 12 – ECOLOGICAL INFORMATION**

**Ecotoxicity:** Not expected to have significant environmental effects.  
**Persistence and Degradability:** Not expected to persist in the environment.  
**Bioaccumulation:** Not expected to bioaccumulate.  
**Mobility:** Not available.  
**Other Adverse Effects:** This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.



## **SECTION 13 – DISPOSAL CONSIDERATIONS**

**Waste Treatment Methods:**

**Disposal of Wastes:** Dispose of product in accordance with local, state, and federal regulations.

**Contaminated Packaging:** Empty containers should be triple rinsed and taken to an approved waste handling site for recycling or disposal.

**Other Information:** None.

## **SECTION 14 – TRANSPORTATION INFORMATION**

**DOT:**

**UN Number:** UN2014  
**Proper Shipping Name:** Hydrogen Peroxide Aqueous Solution.  
**Hazard Class:** 5.1, 8  
**Packing Group:** II

## **SECTION 15 – REGULATORY INFORMATION**

**US Federal Regulations:**

**TSCA:** All ingredients of this product are listed in the TSCA inventory.

**SARA 313:** This product contains the following chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and Title 40 CFR 372.

Chemical Name	CAS Number	Percent Weight
None		

**US State Regulations:**

**California:** This product contains the following chemical or chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm: None.

## **SECTION 16 – OTHER INFORMATION**

**Issue Date:** June 10, 2003

**Revision Date:** April 13, 2023

Health	Flammability	Reactivity	Personal Protection
3	0	1	D

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## **SECTION 1 - IDENTIFICATION**

**Product:** AQUATROL® 15170

**Recommended use of the chemical and restrictions on use:**

**Uses:** Acid-Replacement Descaler

**List of advices against:** Not available.

**Details of the supplier of the Safety Data Sheet:**

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Atlanta, Ga. 30318  
404-355-4580  
800-556-3967  
www.momar.com

**Emergency Telephone Number (INFOTRAC):** North America: 1-800-535-5053  
International: 1-352-323-3500

## **SECTION 2 – HAZARD IDENTIFICATION**

<b>Classification:</b>	Eye Damage/Irritation	2A
	Skin Corrosion/Irritation	2
	Specific Target Organ Toxicity(Single Exposure)	3
<b>Signal Word:</b>	Warning.	
<b>Hazard Statements:</b>	Causes serious eye irritation.	
	Causes skin irritation.	
	May cause respiratory irritation.	

**Pictograms:**



**Precautionary Statements:**

<b>Prevention:</b>	Wash hands and all exposed skin thoroughly after handling. Wear eye protection/face protection. Wear protective gloves. Avoid breathing fume/gas/mist/vapors/spray.
<b>Response:</b>	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If on skin: Wash with water / soap. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/hospital if you feel unwell.

- Storage:** Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.
- Disposal:** Dispose of contents/container to approved waste disposal plant in accordance with federal, state, and local regulations.
- Other Hazards:** None known.

### **SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Name	CAS Number	Percent Weight
Organic Salt	506-89-8	30-70

### **SECTION 4 – FIRST AID MEASURES**

- Eye Contact:** Immediately flush eyes with plenty of water, remove contact lenses, and continue to flush for at least 15-20 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Get medical attention immediately.
- Skin Contact:** Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing. Wash clothing and shoes before reuse. Get medical attention if irritation persists.
- Inhalation:** Remove from exposure. If not breathing, give artificial respiration. If breathing is difficult, get medical attention.
- Ingestion:** Get medical attention immediately. Do not induce vomiting. If victim is conscious and alert, give large amounts of water. Discontinue water if victim feels like they may vomit. Never give anything by mouth to an unconscious person.
- Most Important Symptoms and Effects:**
- Acute:** Severe eye irritation.
- Delayed:** Prolonged or excessive contact with skin could cause damage or dermatitis.

**Indication of Any Immediate Medical Attention and Special Treatment Needed:** None known.

### **SECTION 5 – FIREFIGHTING MEASURES**

**Extinguishing Media:** Use media appropriate to the surrounding fire.

**Specific Hazards Arising From the Substance or Product:** None

**Hazardous Combustion Products:** Oxides of carbon, nitrogen, and chlorine.

**Protective Equipment and Precautions for Firefighters:** Wear a self-contained breathing apparatus in pressure- demand mode, and full protective gear.

### **SECTION 6 – ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment, and Emergency Procedures:** Avoid contact with skin and eyes. Wear protective clothing, see Section 8.

**Environmental Precautions:** Keep out of sewers, drains, and bodies of water. Spills should be diked and absorbed.

**Methods and Materials for Containment and Cleaning Up:** Absorb in vermiculite, dry sand, or earth, and place in containers. Collect and reclaim or dispose of in sealed containers in a licensed waste facility. Liquid material may be removed with vacuum collection. Containers with spillage must be properly labeled with correct contents and hazard symbol.

## **SECTION 7 – HANDLING AND STORAGE**

**Precautions for Safe Handling:** Avoid spilling, skin, and eye contact. Wash thoroughly after handling. Use only with adequate ventilation. For industrial or professional use only. Do not cut or weld empty container. KEEP OUT OF REACH OF CHILDREN.

**Conditions for Safe Storage:** Store in a cool dry place.

**Incompatibilities:** Strong oxidizing agents

## **SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION**

### **Exposure Limits and Recommendations:**

Chemical Name	OSHA PEL	ACGIH TLV	Other Exposure Limits
None			

**Engineering Controls:** Normal ventilation.

### **Personal Protection Measures:**

**Respiratory Protection:** Normally not needed. If needed, use NIOSH approved mask and filter for organic vapor.

**Skin and Body:** Chemical resistant gloves recommended. Chemical resistant apron, as needed.

**Eye Protection:** Safety glasses/goggles recommended.

**Other Recommendations:** None.

## **SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance and Odor:** Clear, light amber liquid with mild odor.

**Odor Threshold:** Not determined.

**pH:** 1

**Freezing Point:** Not determined.

**Boiling Point:** 212°F

**Flash Point:** No flash at boiling.

**Evaporation Rate (BUAC=1):** Slower.

**Flammability:** Not flammable.

**Flammability or Explosion Limits:** **Upper:** Not applicable. **Lower:** Not applicable.

**Vapor Pressure:** Not determined.

**Specific Gravity:** 1.154

**Solubility in Water:** Complete

**Solubility in Other Solvents:** Not determined.

**Partition Coefficient (n-octanol/water):** Not determined.

**Auto-ignition Temperature:** Not determined.

**Decomposition Temperature:** Not determined.  
**Viscosity:** Not determined.  
**Other Information:** Not determined.

## **SECTION 10 – STABILITY AND REACTIVITY**

**Reactivity:** No dangerous reaction known under conditions of normal use.  
**Chemical Stability:** Stable under normal temperature conditions and recommended use.  
**Possible Hazardous Reactions:** Not available.  
**Conditions to Avoid:** Contact with incompatible materials.  
**Incompatible Materials:** Strong oxidizing agents.  
**Hazardous Decomposition Products:** Oxides of carbon, nitrogen, and chlorine.

## **SECTION 11 – TOXICOLOGICAL INFORMATION**

### **Routes of Exposure:**

Inhalation	Ingestion	Skin	Eye
		X	X

### **Physical, Chemical and Toxicological Effects:**

**Symptoms:** Irritation to skin and eyes.

### **Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure:**

**Sensitization:** Not a skin sensitizer.  
**Germ Cell Mutagenicity:** Not classified.  
**Carcinogenicity:** No components of this product are listed by NTP, IARC, or OSHA.  
**Reproductive Toxicity:** Not classified.  
**Specific Target Organ Toxicity:** Eyes

### **Numerical Measures of Toxicity:**

**Product:** Not determined.  
**Component:** Not determined.

## **SECTION 12 – ECOLOGICAL INFORMATION**

**Ecotoxicity:** No Data.  
**Persistence and Degradability:** Not expected to persist in the environment.  
**Bioaccumulation:** Not expect to be a bioaccumulator.  
**Mobility:** Not expected to have mobility.  
**Other Adverse Effects:** This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## **SECTION 13 – DISPOSAL CONSIDERATIONS**

**Waste Treatment Methods:****Disposal of Wastes:**

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

**Contaminated Packaging:**

Empty containers should be taken to an approved waste handling site for recycling or disposal.

**Other Information:**

None.

## **SECTION 14 – TRANSPORTATION INFORMATION**

**DOT:****UN Number:**

**Proper Shipping Name:** Not Regulated

**Hazard Class:****Packing Group:**

## **SECTION 15 – REGULATORY INFORMATION**

**US Federal Regulations:**

**TSCA:** All ingredients of this product are listed in the TSCA inventory.

**SARA 313:** This product contains the following chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and Title 40 CFR 372.: None

**US State Regulations:**

**California:** This product contains the following chemical or chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm: None.

## **SECTION 16 – OTHER INFORMATION**

**Issue Date:** November 24, 2014

**Revision Date:** June 1, 2023

Health	Flammability	Reactivity	Personal Protection
1	0	0	B

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate at the time of publication, Momar, Incorporated makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Momar, Incorporated's control; and therefore, users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes; and they assume all risks of their use, handling, and disposal of the product or from the publications or use of, or reliance upon, information contained herein. This information relates only to the product designed herein and does not relate to its use in combination with any other material or in any other process.

## AquaTrol 15170

### Liquid Inhibited-Acid Scale Remover

#### Principal Application:

AquaTrol 15170 is a strong, inhibited acid-based cleaner for removing scale and other mineral deposits. A powerful penetrant is included, which allows 15170 to diffuse into cracks and porous sites and attack deposits from below, thus shortening descaling time. 15170 also contains a unique inhibitor to control corrosive acid attack on all metal surfaces including galvanized and prevents equipment damage.

#### Use Considerations

15170 can be used to remove scale and other mineral deposits from boilers, cooling towers, condensers, heat exchangers, or any type of equipment in which these materials interfere with efficient heat transfer. 15170 is especially recommended where stainless-steel materials of construction are used. A method of mechanically recirculating the descaling solution will improve performance. The use of a suitable anti-foam product is often needed. 15170 should not be used in equipment constructed of non-acid resistant plastics. Your AquaTrol Water Specialist will provide specific product selection and usage information.

#### Dosage & Control

The quantity of 15170 required to completely descale any particular system will depend upon the size of the system, the composition and quantity of the deposit and other factors. As a general rule, start with 2 gallons of 15170 per each 100 gallons of system water. For heavily scaled systems up to 5 gallons of 15170 per 100 gallons of water may be used. Ideally, the descaling should be accomplished at a pH of 2.5. If the pH of the system water reaches 4.5 before the system is satisfactorily cleaned, additional products should be added.

#### Feeding

When descaling an open recirculating system, the system need not be taken out of service. Close off all bleed-off lines and add 15170 directly to the sump along with a suitable antifoam product. When descaling is complete, open the bleed-off lines completely to allow the spent solution to leave the system. Spent acid cleaning solution may normally be drained directly to the sanitary sewer or waste line, but if neutralization is required, a separate vessel should be used along with a suitable quantity of AquaTrol 14525. When descaling a condenser or heat exchanger or other process equipment, the unit must first be isolated from its recirculating system. An acid resistant pump and a surge tank of at least 50 gallons capacity should be set up to recirculate the solution through the unit and back to the surge tank. Partially fill the tank with water, then add 15170 and pump into the system. Repeat as often as necessary to get the required quantity of 15170 into the system. Recirculate the solution for 4-6 hours, or as long as necessary to complete the descaling. When descaling is complete, the spent acid solution may normally be drained directly to the sanitary sewer or waste line. If neutralization is required, a separate vessel should be used along with a suitable quantity of AquaTrol 14525. Your AquaTrol Water Specialist will provide complete cleaning procedure and handling instructions.

#### Typical Properties

pH	1.0
Density	9.6 Pounds per Gallon
Appearance	Clear, Light Amber Liquid
Odor	Mild Acrid Odor

#### Handling Storage & Safety

Use normal precautions for chemical handling. Wear appropriate apron, gloves, or other protective clothing. Always wear goggles or face shield for eye protection. Keep out of the reach of children. Avoid contact with eyes, skin, or clothing. Do not swallow. Read container labeling and Safety Data Sheet for more complete information on handling precautions. AquaTrol 15170 is available in 55, 35, 20, and 5-gallon non-returnable containers. Store at room temperature; protect from freezing and extreme heat. Keep container closed when not in use. Use promptly upon opening.