

# **Biocide**

# **Justeq07**

# **MSDS**

# Material Safety Data Sheet

## Justeq07

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### 1. IDENTIFICATION OF THE SUBSTANCE AND COMPANY

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PRODUCT NAME Justeq07  
CHEMICAL DESCRIPTION Alkaline antimicrobial solution  
SUPPLIER Justeq, LLC  
2536 Whitehall Lane  
Naperville, IL 60564.

EMERGENCY TELEPHONES:

NON-EMERGENCY INFORMATION 630-428-4143  
24 HOUR MEDICAL EMERGENCY CHEMTREC 800-424-9300  
24 HOUR SHIPPING EMERGENCY CHEMTREC 800-424-9300

NFPA 704M/HMIS Rating:

3/3 HEALTH 0/0 FLAMMABILITY 1/1 REACTIVITY 0 OTHER  
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

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### 2. COMPOSITION/INFORMATION ON INGREDIENT

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Our hazard evaluation has identified the following chemical ingredients as hazardous under OSHA's Hazard Communication Rule, 29 CFR 1910.1200.

NAME	CAS NO	% (W/W)
Sodium Hydroxide	1310-73-2	1.0 – 10.0
Sodium Hypochlorite	7681-52-9	6.0 – 8.0

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### 3. HAZARDS IDENTIFICATION

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EMERGENCY OVERVIEW:

DANGER: Corrosive. Causes severe eye and skin injury. Harmful if inhaled. Harmful if swallowed. Do not get in eyes, on skin or clothing. Wear goggles and face shield and rubber gloves when handling.

Remove and wash contaminated clothing before reuse. Wash thoroughly after handling.

PRIMARY ROUTES OF EXPOSURE: Eye, Skin, Inhalation

EYE CONTACT:

Corrosive. Will cause eye burns and may cause permanent tissue damage.

SKIN CONTACT:

May cause severe irritation or tissue damage depending on the length of exposure and the type of first aid administered.

INGESTION:

Corrosive; causes chemical burns to the mouth, throat and stomach.

INHALATION:

Irritating, in high concentrations, to the eyes, nose, throat and lungs.

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#### 4. FIRST-AID MEASURES

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INHALATION:

Remove victim immediately from source of exposure.

Provide rest, warmth and fresh air.

If breathing stops, provide artificial respiration.

Get medical attention.

INGESTION:

Do not induce vomiting.

Rinse mouth thoroughly.

Drink lots of water.

Get medical attention.

SKIN CONTACT:

Immediately remove contaminated clothing.

Rinse immediately with plenty of water.

Continue to rinse for at least 15 minutes.

Get medical attention if irritation persists after washing.

EYE CONTACT:

Rinse the eye with water immediately.

Continue to rinse for at least 15 minutes.

Contact physician if irritation persists.

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## 5. FIRE-FIGHTING MEASURES

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### EXTINGUISHING MEDIA:

Use fire-extinguishing media appropriate for surrounding materials.

### UNUSUAL FIRE AND EXPLOSION HAZARDS:

No unusual fire and explosion hazards noted.

### SPECIFIC HAZARDS:

Toxic gases/ vapors/ fumes of chlorine.

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## 6. ACCIDENTAL RELEASE MEASURES

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### PERSONAL PRECAUTIONS:

Restrict access to area as appropriate until clean-up operations are complete.

Wear protective clothing as described in Section 8 of this safety data sheet.

### ENVIRONMENTAL PRECAUTIONS:

Do not discharge into drains, watercourses or onto the ground.

### SPILL CLEAN UP METHODS:

Absorb in vermiculite, dry sand or earth and place into containers.

Containers with collected spillage must be properly labeled with correct contents and hazard symbol.

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## 7. HANDLING AND STORAGE

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### HANDLING:

Do not get in eyes, on skin, on clothing.

Do not take internally.

Use with adequate ventilation.

Avoid generating aerosols and mists.

Keep the containers closed when not in use.

Have emergency equipment (for fires, spills, leaks, etc.) readily available.

#### STORAGE CONDITIONS:

Store the containers tightly closed.

Store away from incompatible materials.

Store in suitable labeled containers.

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### 8. EXPOSURE CONTROL/PERSONAL PROTECTION

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#### ENGINEERING MEASURES:

Provide adequate general and local exhaust ventilation.

#### RESPIRATORY EQUIPMENT:

If ventilation is insufficient, suitable respiratory protection must be provided. In case of inadequate ventilation or risk of inhalation of vapors, use suitable respiratory with combination filter (type A2/P2)

#### HAND PROTECTION:

Selection of a suitable glove depends on work conditions and whether the product is present on its own or in combination with other substances.

It has found that gloves made from rubber, neoprene or PVC provide short term splash protection.

#### EYE PROTECTION:

Use safety goggles and face shield in case of splash risk.

#### OTHER PROTECTION:

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapor contact.

#### HYGIENE MEASURES:

Provide shower facilities near the work place.

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

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APPEARANCE	Liquid
COLOUR	Light Yellow
ODOR	Slight Chlorine

SPECIFIC GREVITY      1.20 – 1.30

PH                              12.5 – 13.7

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## 10. STABILITY AND REACTIVITY

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### STABILITY:

Stable under normal temperature conditions and recommended use.

### CONDITIONS TO AVOID:

Avoid excessive heat for prolonged period of time.

Avoid contact with strong reducing agents.

Avoid contact with acids.

### HAZARDOUS POLYMERIZATION:

Will not polymerize.

### HAZARDOUS DECOMPOSITION PRODUCTS:

Toxic gases/ vapors/ fumes of: Chlorine.

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## 11. DISPOSAL CONSIDERATIONS

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### DISPOSAL METHODS:

Absorb in vermiculite or dry sand, dispose in licensed special waste.

Do not allow runoff to sewer, waterway or ground.

Dispose of waste and residues in accordance with local authority requirements.

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## 12. OTHER INFORMATION

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### REVISION COMMENTS:

This is first issue.

### MATERIAL SAFETY DATA SHEET STATUS:

Approved.

DATE: 12/18/2006

Prepared by: Sang-Hea Shim





For safety reason it is IMPERATIVE that customers:


1. Ensure that all those who use the products are supplied with all relevant information contained within the Material Safety Data Sheet and Technical Bulletin concerning the applications for which the product is designed and any instructions and warnings contained therein.
2. Consult Justeq, LLC before using or supplying the product for any other applications.




The information contained herein is based on the present state of our knowledge and is intended to describe our product from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.

# **Aluminum Inhibitor MSDS**



1.PRODUCT AND COMPANY IDENTIFICATION			
<b>Manufactured By:</b>		GHS Pictogram (s)	DOT Symbol
<b>Richardson Electronics</b> 40W267 Keslinger Road Lafox, IL 60147-0393		<b>Irritant</b> 	Non Regulated Materials
<b>24 Hour Emergency Response No.:</b>		Personal Protective Equipments	
<b>800-424-9300 CHEMTREC®</b>		  	
<b>Product Name:</b>	<b>Al-Control</b>		
<b>Product Use:</b>	A Blend of Water Treatment Application Materials		
To the best of our knowledge, this Safety Data Sheet is prepared to comply with US OSHA 29 CFR 1910.1200 and other governmental agencies both domestic and foreign. Hazard and precautionary statements are based on maximum listed concentrations of each hazardous ingredient. Unlisted ingredients are not "hazardous" per the OSHA Hazard Communication Standard (29 CFR 1910.1200) and/or other governmental agencies.			

2. HAZARDS IDENTIFICATION			
EMERGENCY OVERVIEW			
GHS Classification	GHS Symbols	Hazard Statements	Precautionary Statements
GHS Label Elements  "WARNING"	<b>Irritant</b> 	H303-May be harmful if swallowed H316-Causes mild skin irritation. H320-Causes eye irritation.	P102-Keep out of reach of children. P233-Keep container tightly closed. P262-Do not gets in eyes, on skin or on clothing. P264-Wash thoroughly after handling. P281-Use personal protective equipment as required.

2. PRODUCT INGREDIENTS				
Hazardous Components	% by Wt.	CAS Number	Hazard Statements (Section 15)	Hazard Symbol (s)
Sodium Molybdate	0-10	7631-19-0	H303-May be harmful if swallowed. H316-Causes mild skin irritation. H320-Causes eye irritation H332-Harmful if inhaled H335-May cause respiratory irritation	
Sodium Tetra Borate	0-10	1330-43-4	H303-May be harmful if swallowed. H316-Causes mild skin irritation. H320-Causes eye irritation H332-Harmful if inhaled H335-May cause respiratory irritation	
Sodium Poly Silicate	0-10	1344-09-8	H303-May be harmful if swallowed. H316-Causes mild skin irritation. H320-Causes eye irritation	
<b>Non Hazardous Ingredient</b>	<b>0-79</b>			
<b>Total</b>	<b>100.00</b>			

4. FIRST AID MEASURES	
<b>Inhalation:</b>	Remove to fresh air. If not breathing, give artificial respiration. If breathing difficult, give oxygen. Call a physician if any difficulties persist.
<b>Eyes:</b>	Flush eyes with a large amount of water for 15 minutes. Seek medical attention immediately if any irritation persists. After first aid, get appropriate in-plant, paramedic or community medical support.
<b>Skin:</b>	Wash affected areas thoroughly with soap and water for at least 15 minutes. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Seek medical attention if any irritation persists.
<b>Ingestion</b>	If person can swallow, give 2 glasses of water to drink. DO NOT INDUCE VOMITING! After first aid, seek appropriate in-plant, paramedic, or community medical support. Never give anything by mouth to an unconscious person. <i>After first aid, get appropriate in-plant, paramedic, or community medical support.</i>

5. FIRE FIGHTING MEASURES	
<b>Flammability Classification:</b>	Non Flammable
<b>Suitable Extinguishing Media:</b>	Water fog, Alcohol foam, Carbon Dioxide, Dry Chemical
<b>Unusual Fire or Explosion Hazards:</b>	None known other than material can splatter above 100°C/212°F.
<b>Hazardous Combustion Products:</b>	Unknown but carbon monoxide may be released on burning.
<b>Fire-Fighting Instructions:</b>	Do not release runoff from fire control methods to sewers or waterways.
<b>Fire-Fighting Equipment:</b>	Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions:</b>	Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation
<b>Small Spills:</b>	Absorb spill with paper towel or similar absorbent; or flush to sewer or ground with large amounts of water.
<b>Large Spills:</b>	For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways. Absorb spill with vermiculite, oil dry or similar non-reactant absorbent. Solidified product represents no environmental hazard.
<b>Containment:</b>	Accumulate the absorbed materials and dispose of according to federal, state and local regulations.
<b>Cleanup:</b>	Accumulate the absorbed materials and dispose of according to federal, state and local regulations.
<b>Environmental Precautions:</b>	Follow applicable OSHA/CERCLA or any other regulations (29 CFR 1910.120) as well as any state or local regulations that may apply.

**7. HANDLING AND STORAGE**

<b>Precautions for safe handling:</b>	Use the recommended safety controls and personal protective equipment as outlined. Fully review all data before handling of the material itself. Avoid contact with skin or eyes. Avoid breathing dust or mist. Keep from contact with clothing and other combustible materials. Observe good personal hygiene and housekeeping practices. Wash thoroughly after handling.
<b>Conditions for safe Storage:</b>	Do not store in direct sunlight. Store in a tightly closed container. Store in a cool dry, well ventilated area. Do not store this material near any strong acids, bases, oxidizers, flammables or any other type of reactive material. Do not expose the material to temperature extremes. Do not store product above 77°F.
<b>Regulatory Requirements:</b>	Store materials according to all local, state and federal guidelines that are established for non-regulated chemical products.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with limit values that require monitoring at the workplace:**

Hazardous Components	CAS Number	OSHA PEL/TWA STEL	ACGIH TLV/TWA STEL	Other
Sodium Molybdate	7631-19-0	5mg/m3 Dust	None Est.	
Sodium Tetra Borate	1330-43-4	15mg/M3 Dust	2mg/m3 Dust	
Sodium Poly Silicate	1344-09-8	None Est.	None Est.	

**Engineering Controls:****Ventilation:**

Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

**Respiratory Protection:**

Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or non-routine operations (cleaning spills, reactor vessel, or storage tanks), wear an SCBA. *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

**Personal Protective Equipment (PPE):**

Wear protective eyeglasses or chemical safety goggles, per OSHA eye-and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses. At a minimum wear safety glasses with side shields as well as chemically protective gloves and aprons to prevent prolonged or repeated skin contact.

**Safety Stations:**

Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

**Contaminated Equipment:**

Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

**Comments:**

Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

**Work/Hygienic Practices**

Consistent use of afore-mentioned personal protective equipment is essential in preventing injuries or irritation.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Form:</b>	Liquid	<b>Appearance:</b>	Light Amber Liquid	<b>Odor:</b>	Characteristic
<b>pH:</b>	12+/-	<b>Vapor Pressure:</b>	Same as water	<b>Flammability:</b>	Non Flammable
<b>Specific Gravity:</b>	1.06	<b>Vapor Density:</b>	Same as water	<b>Flash Point:</b>	NIA
<b>Water Solubility:</b>	Complete	<b>Evaporation Rate:</b>	1.0	<b>Auto Ignition Temp:</b>	NIA
<b>Other Solubilities:</b>	Not Determined	<b>Melting Point:</b>	NA	<b>LEL:</b>	Not Determined
<b>% Volatile:</b>	80%+/-	<b>Freeze Point:</b>	Approx. 32°F+/-	<b>UEL:</b>	Not Determined
<b>Boiling Point:</b>	Same as Water	<b>Decomposition Temp:</b>	Not Determined		

**10. STABILITY AND REACTIVITY****Stability:**

This product is stable at room temperature in closed containers under normal storage and handling conditions. However, avoid temperature extremes.

**Conditions to Avoid:**

Excessive temperature, contact with any type of reactive chemicals

**Hazardous Polymerization:**

Hazardous polymerization will not occur.

**Chemical Incompatibilities:**

Avoid contact with Strong Acids, Strong Alkalis, Oxidizers or any other type of reactive material.

**Hazardous Decomposition Products:**

There are no known hazardous decomposition products for this material unless the material is burned in which case undetermined evolution of toxic gases may occur.

**11. TOXICOLOGICAL INFORMATION**

Hazardous Components	CAS No.:	LD50 of Ingredient (Specify Species & Route)	LD50 Dermal of Ingredient (Specify Species)
Sodium Molybdate	7631-19-0	LD50-Oral-Rat -4,000mg/Kg	No Data Available
Sodium Tetra Borate	1330-43-4	LD50-Oral-Rat -4,000-6,000mg/Kg	No Data Available
Sodium Poly Silicate	1344-09-8	LD50-Oral-Rat -1,153mg/Kg	

**Primary Irritant Effects:**

<b>Routes of Entry:</b>	Absorbed through skin, Dermal Contact, Eye Contact, Inhalation.
<b>Eye Effects:</b>	Irritation to eyes & possible burning if materials are not immediately rinsed from the eye.
<b>Acute Inhalation Effects:</b>	Might produce irritation to respiratory system.
<b>Skin Effects:</b>	Irritation to skin.
<b>Acute Oral/Ingestion Effects:</b>	Not tested for this blend. Harmful if swallowed.
<b>Chronic Effects on Humans:</b>	No specific studies have been conducted for this specific blend.
<b>Other Toxic Effects on Humans:</b>	No specific studies have been conducted for this specific blend.
<b>Special Remarks- Human Chronic Effects:</b>	No other information for chronic effects on humans.
<b>Carcinogenicity:</b>	IARC, NTP, and OSHA do not list this product or its components as a carcinogen.
<b>Mutagenicity:</b>	No mutagenic effects are known to be applicable for the formulation components of this product.
<b>Teratogenicity:</b>	No studies have been performed for this specific product blend.
<b>Target Organ Statement:</b>	No studies have been conducted for this specific product blend.

**12. ECOLOGICAL INFORMATION**

Hazardous Components	CAS No.:	LC:50	EC:50
Sodium Molybdate	7631-19-0	LC-50-Oncorhynchus mykiss (rainbow trout) – 800mg/l – 96H	
Sodium Tetra Borate	1330-43-4	Daphnia Magna – 48hr EC50 = 133 mg/B/L (lowest value)	
Sodium Poly Silicate	1344-09-8	This material is believed to be practically non-toxic to fish.	
<b>Special Remarks-Products of biodegradation:</b>	This material has inorganic components and not subject to biodegradation.		

**13. WASTE DISPOSAL CONSIDERATIONS**


<b>Disposal Regulatory Requirements:</b>	Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable federal, state and local regulations.
<b>Container Cleaning and Disposal:</b>	Triple rinse the empty containers with water before disposal to be reconditioned or land fill or garbage.

**14. TRANSPORTATION INFORMATION**

<b>Proper Shipping Name:</b>	NON REGULATED MATERIALS				<b>DOT/GHS Shipping Label Symbols:</b>
<b>Contains:</b>					None
<b>Hazard Class:</b>	<b>Marine Pollutant</b>	<b>UN Number:</b>	<b>Packing Group:</b>	<b>ERG Number:</b>	
Non Hazardous	No	NA	NA	NA	
<b>Special Shipping Notations:</b>	None				

Note: Transportation information provided is for reference only. Client is urged to consult CFR 49, Parts 100-177, IMDG, IATA, EU, United Nations, TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

**15. REGULATORY INFORMATION**

<b>Hazard Symbols:</b>	
<b>Hazard Statements:</b>	H303-May be harmful if swallowed. H316-Causes mild skin irritation. H320-Causes eye irritation
<b>Safety Phrases:</b>	S3/7/9/49-Keep only in the original container tightly closed in a cool well-ventilated place. S24/25-Avoid contact with skin and eyes. S26-In case of contact with eyes, rinse immediately with plenty of water and seek medical advise. S36/37/39-Wear suitable protective clothing, gloves and eye/face protection. S62-If swallowed do not induce vomiting; seek medical advice immediately and show this container or label.

**EPA Regulations:**

<b>RCRA Hazardous Waste Number:</b>	Product blend is not listed (40 CFR 261.33)
<b>RCRA Hazardous Waste Classification (40 CFR 261.):</b>	Product blend is not classified.
<b>CERCLA Hazardous Substance (40 CFR 302.4):</b>	Product blend is unlisted specific per RCRA, Sec. 3001; CWA, Sec. 311 (b) (4); CWA, Sec. 307 (a).
<b>CAA, Sec. 112 CERCLA Reportable Quantity (RQ):</b>	Not listed

<b>SARA 313 Codes:</b> This product is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40CFR372.	Not listed
<b>SARA Toxic Chemical (40CFR 372.65):</b>	Not listed
<b>Sara 302/304 Extremely Hazardous Substance (40CFR 355)</b>	Not listed
<b>Sara 313 SARA EHS (Extremely Hazardous Substance) (40 CFR 355):</b>	Not listed
<b>Threshold Planning Quantity (TPQ):</b>	Not listed
<b>OSHA Regulations:</b>	
<b>Air Contaminant (20 CFR 1910.1000, Table Z-1, Z-1-A):</b>	Not listed.
<b>OSHA Specifically Regulated Substance (29 CFR 1910.):</b>	Not Listed
<b>State Regulations:</b>	As a product blend, the materials are generally not listed. Check with your local state regulatory board for more detailed information regarding the specific components of this product.
<b>National Regulations:</b>	All components of this product are listed in the U.S. Environmental Protection Agencies, Toxic Substance Control Act (TSCA) Chemical Substance Inventory. All components of this product are listed on the Canadian Non-Domestic Substances List (NDSL).

**16. OTHER INFORMATION**

SDS Prepared/Reviewed By: **G.S.Garcia-**  
Date of Preparation: 1/2014

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.





**USER'S RESPONSIBILITY**


The information and recommendations contained herein cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. It is your responsibility to use this information to develop appropriate work practice guidelines and employee instructional programs for your operation.



**DISCLAIMER OF LIABILITY**

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this material. Information contained herein is believed to be true and accurate but all statements or suggestions are made without warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. Compliance with all applicable federal, state and local laws and regulations remains the responsibility of the user.

# **Copper Inhibitor MSDS**

1.PRODUCT AND COMPANY IDENTIFICATION			
<b>Manufactured By:</b>		GHS Pictogram (s)	DOT Symbol
<b>Richardson Electronics</b> 40W267 Keslinger Road Lafox, IL 60147-0393		<b>Irritant</b> 	Non Regulated Materials
<b>24 Hour Emergency Response No.:</b>		Personal Protective Equipments	
<b>800-424-9300 CHEMTREC®</b>		  	
<b>Product Name:</b>	<b>Cu-Control</b>		
<b>Product Use:</b>	A Blend of Water Treatment Application Materials		
To the best of our knowledge, this Safety Data Sheet is prepared to comply with US OSHA 29 CFR 1910.1200 and other governmental agencies both domestic and foreign. Hazard and precautionary statements are based on maximum listed concentrations of each hazardous ingredient. Unlisted ingredients are not "hazardous" per the OSHA Hazard Communication Standard (29 CFR 1910.1200) and/or other governmental agencies.			

2. HAZARDS IDENTIFICATION			
EMERGENCY OVERVIEW			
GHS Classification	GHS Symbols	Hazard Statements	Precautionary Statements
GHS Label Elements  "WARNING"	<b>Irritant</b> 	H303-May be harmful if swallowed H316-Causes mild skin irritation. H320-Causes eye irritation.	P102-Keep out of reach of children. P233-Keep container tightly closed. P262-Do not gets in eyes, on skin or on clothing. P264-Wash thoroughly after handling. P281-Use personal protective equipment as required.

2. PRODUCT INGREDIENTS				
Hazardous Components	% by Wt.	CAS Number	Hazard Statements (Section 15)	Hazard Symbol (s)
Benzotriazole	30-60	95-14-7	H303-May be harmful if swallowed. H316-Causes mild skin irritation. H320-Causes eye irritation	
1,2-Propanediol	40-70	57-55-6	H303-May be harmful if swallowed. H316-Causes mild skin irritation. H320-Causes eye irritation	
Non Hazardous Ingredient				
<b>Total</b>	<b>100.00</b>			

4. FIRST AID MEASURES	
<b>Inhalation:</b>	Remove to fresh air. If not breathing, give artificial respiration. If breathing difficult, give oxygen. Call a physician if any difficulties persist.
<b>Eyes:</b>	Flush eyes with a large amount of water for 15 minutes. Seek medical attention immediately if any irritation persists. After first aid, get appropriate in-plant, paramedic or community medical support.
<b>Skin:</b>	Wash affected areas thoroughly with soap and water for at least 15 minutes. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Seek medical attention if any irritation persists.
<b>Ingestion</b>	If person can swallow, give 2 glasses of water to drink. <b>DO NOT INDUCE VOMITING!</b> After first aid, seek appropriate in-plant, paramedic, or community medical support. Never give anything by mouth to an unconscious person. <i>After first aid, get appropriate in-plant, paramedic, or community medical support.</i>

5. FIRE FIGHTING MEASURES	
<b>Flammability Classification:</b>	Non Flammable
<b>Suitable Extinguishing Media:</b>	Water fog, Alcohol foam, Carbon Dioxide, Dry Chemical
<b>Unusual Fire or Explosion Hazards:</b>	None known other than material can splatter above 100°C/212°F.
<b>Hazardous Combustion Products:</b>	Unknown but carbon monoxide may be released on burning.
<b>Fire-Fighting Instructions:</b>	Do not release runoff from fire control methods to sewers or waterways.
<b>Fire-Fighting Equipment:</b>	Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions:</b>	Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation
<b>Small Spills:</b>	Absorb spill with paper towel or similar absorbent; or flush to sewer or ground with large amounts of water.
<b>Large Spills:</b>	For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways. Absorb spill with vermiculite, oil dry or similar non-reactant absorbent. Solidified product represents no environmental hazard.
<b>Containment:</b>	Accumulate the absorbed materials and dispose of according to federal, state and local regulations.
<b>Cleanup:</b>	Accumulate the absorbed materials and dispose of according to federal, state and local regulations.
<b>Environmental Precautions:</b>	Follow applicable OSHA/CERCLA or any other regulations (29 CFR 1910.120) as well as any state or local regulations that may apply.

**7. HANDLING AND STORAGE**

<b>Precautions for safe handling:</b>	Use the recommended safety controls and personal protective equipment as outlined. Fully review all data before handling of the material itself. Avoid contact with skin or eyes. Avoid breathing dust or mist. Keep from contact with clothing and other combustible materials. Observe good personal hygiene and housekeeping practices. Wash thoroughly after handling.
<b>Conditions for safe Storage:</b>	Do not store in direct sunlight. Store in a tightly closed container. Store in a cool dry, well ventilated area. Do not store this material near any strong acids, bases, oxidizers, flammables or any other type of reactive material. Do not expose the material to temperature extremes. Do not store product above 77°F.
<b>Regulatory Requirements:</b>	Store materials according to all local, state and federal guidelines that are established for non-regulated chemical products.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with limit values that require monitoring at the workplace:**

Hazardous Components	CAS Number	OSHA PEL/TWA STEL	ACGIH TLV/TWA STEL	Other
Benzotriazole	95-14-7	None Est.	None Est.	
1,2-Propanediol	57-55-6	None Est.	None Est.	

**Engineering Controls:**

**Ventilation:** Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

**Respiratory Protection:** Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or non-routine operations (cleaning spills, reactor vessel, or storage tanks), wear an SCBA. *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

**Personal Protective Equipment (PPE):** Wear protective eyeglasses or chemical safety goggles, per OSHA eye-and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses. At a minimum wear safety glasses with side shields as well as chemically protective gloves and aprons to prevent prolonged or repeated skin contact.

**Safety Stations:** Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

**Contaminated Equipment:** Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

**Comments:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, using the toilet, or applying cosmetics.

**Work/Hygienic Practices** Consistent use of afore-mentioned personal protective equipment is essential in preventing injuries or irritation.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Form:</b>	Liquid	<b>Appearance:</b>	Light Amber Liquid	<b>Odor:</b>	Characteristic
<b>pH:</b>	<10	<b>Vapor Pressure:</b>	Same as water	<b>Flammability:</b>	Non Flammable
<b>Specific Gravity:</b>	1.13	<b>Vapor Density:</b>	2.1+/-	<b>Flash Point:</b>	NIA
<b>Water Solubility:</b>	Complete	<b>Evaporation Rate:</b>	1.0	<b>Auto Ignition Temp:</b>	NIA
<b>Other Solubilities:</b>	Not Determined	<b>Melting Point:</b>	NA	<b>LEL:</b>	Not Determined
<b>% Volatile:</b>	60%+/-	<b>Freeze Point:</b>	Approx. 8°F+/-	<b>UEL:</b>	Not Determined
<b>Boiling Point:</b>	388°F+/-	<b>Decomposition Temp:</b>	Not Determined		

**10. STABILITY AND REACTIVITY**

**Stability:** This product is stable at room temperature in closed containers under normal storage and handling conditions. However, avoid temperature extremes.

**Conditions to Avoid:** Excessive temperature, contact with any type of reactive chemicals

**Hazardous Polymerization:** Hazardous polymerization will not occur.

**Chemical Incompatibilities:** Avoid contact with Strong Acids, Strong Alkalis, Oxidizers or any other type of reactive material.

**Hazardous Decomposition Products:** There are no known hazardous decomposition products for this material unless the material is burned in which case undetermined evolution of toxic gases may occur.

**11. TOXICOLOGICAL INFORMATION**

Hazardous Components	CAS No.:	LD50 of Ingredient (Specify Species & Route)	LD50 Dermal of Ingredient (Specify Species)
Benzotriazole	95-14-7	LD50-Oral-Rat -560mg/Kg	Dermal LD50-Rabbit, >2,000 mg/kg
1,2-Propanediol	57-55-6	22000mg/kg Oral Rat 22000mg/kg Oral Mouse	20800mg/kg Rabbit Mutagenic to Human

**Primary Irritant Effects:**

<b>Routes of Entry:</b>	Absorbed through skin, Dermal Contact, Eye Contact, Inhalation.
<b>Eye Effects:</b>	Irritation to eyes & possible burning if materials are not immediately rinsed from the eye.
<b>Acute Inhalation Effects:</b>	Might produce irritation to respiratory system.
<b>Skin Effects:</b>	Irritation to skin.
<b>Acute Oral/Ingestion Effects:</b>	Not tested for this blend. Harmful if swallowed.
<b>Chronic Effects on Humans:</b>	No specific studies have been conducted for this specific blend.
<b>Other Toxic Effects on Humans:</b>	No specific studies have been conducted for this specific blend.
<b>Special Remarks- Human Chronic Effects:</b>	No other information for chronic effects on humans.
<b>Carcinogenicity:</b>	IARC, NTP, and OSHA do not list this product or its components as a carcinogen.
<b>Mutagenicity:</b>	No mutagenic effects are known to be applicable for the formulation components of this product.
<b>Teratogenicity:</b>	No studies have been performed for this specific product blend.
<b>Target Organ Statement:</b>	No studies have been conducted for this specific product blend.

**12. ECOLOGICAL INFORMATION**

Hazardous Components	CAS No.:	LC:50	EC:50
Benzotriazole	95-14-7	Zebra Fish – (96H) – 100 mg/L	
1,2-Propanediol	57-55-6	>5000mg/l 24hr Gold Fish	
<b>Special Remarks-Products of biodegradation:</b>	This material has organic components and is subject to biodegradation.		


**13. WASTE DISPOSAL CONSIDERATIONS**

<b>Disposal Regulatory Requirements:</b>	Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable federal, state and local regulations.
<b>Container Cleaning and Disposal:</b>	Triple rinse the empty containers with water before disposal to reconditioned or land fill or garbage.

**14. TRANSPORTATION INFORMATION**

<b>Proper Shipping Name:</b>	NON REGULATED MATERIALS				<b>DOT/GHS Shipping Label Symbols:</b>
<b>Contains:</b>					None
<b>Hazard Class:</b>	<b>Marine Pollutant</b>	<b>UN Number:</b>	<b>Packing Group:</b>	<b>ERG Number:</b>	
Non Hazardous	No	NA	NA	NA	
<b>Special Shipping Notations:</b>	None				
Note: Transportation information provided is for reference only. Client is urged to consult CFR 49, Parts 100-177, IMDG, IATA, EU, United Nations, TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.					

**15. REGULATORY INFORMATION**

<b>Hazard Symbols:</b>	
<b>Hazard Statements:</b>	H303-May be harmful if swallowed. H316-Causes mild skin irritation. H320-Causes eye irritation
<b>Safety Phrases:</b>	S3/7/9/49-Keep only in the original container tightly closed in a cool well-ventilated place. S24/25-Avoid contact with skin and eyes. S26-In case of contact with eyes, rinse immediately with plenty of water and seek medical advise. S36/37/39-Wear suitable protective clothing, gloves and eye/face protection. S62-If swallowed do not induce vomiting; seek medical advice immediately and show this container or label.

**EPA Regulations:**

<b>RCRA Hazardous Waste Number:</b>	Product blend is not listed (40 CFR 261.33)
<b>RCRA Hazardous Waste Classification (40 CFR 261.):</b>	Product blend is not classified.
<b>CERCLA Hazardous Substance (40 CFR 302.4):</b>	Product blend is unlisted specific per RCRA, Sec. 3001; CWA, Sec. 311 (b) (4); CWA, Sec. 307 (a),
<b>CAA, Sec. 112 CERCLA Reportable Quantity (RQ):</b>	Not listed

<b>SARA 313 Codes: This product is subject to the reporting requirements of section 313 of the Emergency Planning and</b>	Not listed
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<b>Community Right to Know Act of 1986 and 40CFR372.</b>	
<b>SARA Toxic Chemical (40CFR 372.65):</b>	Not listed
<b>Sara 302/304 Extremely Hazardous Substance (40CFR 355)</b>	Not listed
<b>Sara 313 SARA EHS (Extremely Hazardous Substance) (40 CFR 355):</b>	Not listed
<b>Threshold Planning Quantity (TPQ):</b>	Not listed
<b>OSHA Regulations:</b>	
<b>Air Contaminant (20 CFR 1910.1000, Table Z-1, Z-1-A):</b>	Not listed.
<b>OSHA Specifically Regulated Substance (29 CFR 1910.):</b>	Not Listed
<b>State Regulations:</b>	As a product blend, the materials are generally not listed. Check with your local state regulatory board for more detailed information regarding the specific components of this product.
<b>National Regulations:</b>	All components of this product are listed in the U.S. Environmental Protection Agencies, Toxic Substance Control Act (TSCA) Chemical Substance Inventory. All components of this product are listed on the Canadian Non-Domestic Substances List (NDSL).

**16. OTHER INFORMATION**

SDS Prepared/Reviewed By: G.S.Garcia-  
Date of Preparation: 1/2014

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**USER'S RESPONSIBILITY**

The information and recommendations contained herein cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. It is your responsibility to use this information to develop appropriate work practice guidelines and employee instructional programs for your operation.

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