

# SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>PRODUCTO™ RI-618</b> CORROSION INHIBITOR	
<b>Other means of identification</b>		
<b>SDS number</b>	Not applicable	
<b>Recommended use</b>	CORROSION INHIBITOR	
<b>Recommended restrictions</b>	None known.	
<b>Manufacturer/Importer/Supplier/Distributor information</b>		
<b>Manufacturer</b>		
<b>Company name</b>	CIMCOOL® Industrial Products LLC 3000 Disney Street Cincinnati, Ohio 45209	
<b>Telephone (General Information)</b>	513-458-8199	
<b>Emergency telephone number</b>	1-800-424-9300 (CHEMTREC)	
<b>Emergency telephone number (outside USA)</b>	1-703-527-3887 (CHEMTREC)	

## 2. Hazard(s) identification

<b>Physical hazards</b>	Corrosive to metals	Category 1
<b>Health hazards</b>	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
<b>Environmental hazards</b>	Not classified.	
<b>OSHA defined hazards</b>	Not classified.	

### Label elements



<b>Signal word</b>	Warning
<b>Hazard statement</b>	May be corrosive to metals. Causes skin irritation. Causes serious eye irritation.
<b>Precautionary statement</b>	
<b>Prevention</b>	Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. In case of inadequate ventilation wear respiratory protection. Keep only in original container. Avoid release to the environment.
<b>Response</b>	IF exposed or concerned: Call a POISON CENTER/doctor. 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 plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Take off contaminated clothing and wash before reuse.
<b>Storage</b>	Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Store away from incompatible materials. Store in accordance with local/regional/national/international regulation.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	None.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
TETRAPOTASSIUM PYROPHOSPHATE		7320-34-5	7 - 13
MONOETHANOLAMINE		141-43-5	1 - 5
Other components below reportable levels			60 - 100

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

#### Inhalation

If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

#### Skin contact

Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

#### Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

#### Ingestion

Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Rinse mouth thoroughly. Drink 1 or 2 glasses of water. Get medical advice/attention if you feel unwell.

#### Most important symptoms/effects, acute and delayed

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

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

Provide general supportive measures and treat symptomatically. Symptoms may be delayed.

#### General information

If exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.

### 5. Fire-fighting measures

#### Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>). Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Unsuitable extinguishing media

Not applicable, non-combustible.

#### Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

#### Special protective equipment and precautions for firefighters

Wear suitable protective equipment.

#### Fire fighting equipment/instructions

Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk.

#### Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials. In the event of fire and/or explosion do not breathe fumes.

### 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**

Local authorities should be advised if significant spillages cannot be contained. This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Clean up in accordance with all applicable regulations. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

**Environmental precautions**

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground. Contact local authorities in case of spillage to drain/aquatic environment. Use appropriate containment to avoid environmental contamination.

**7. Handling and storage**

**Precautions for safe handling**

Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

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

To maintain product quality, do not store in heat or direct sunlight. Store in a cool, dry place out of direct sunlight. Keep only in the original container. Store away from incompatible materials (see Section 10 of the SDS). Keep this material away from food, drink and animal feed. Do not allow material to freeze. If frozen, product may separate. Thaw completely at room temperature and stir thoroughly prior to use.

**8. Exposure controls/personal protection**

**Occupational exposure limits**

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

	Type	Value
MONOETHANOLAMINE (CAS 141-43-5)	PEL	6 mg/m3
		3 ppm

**US. NIOSH: Pocket Guide to Chemical Hazards**

	Type	Value
MONOETHANOLAMINE (CAS 141-43-5)	STEL	15 mg/m3
	TWA	6 ppm
		8 mg/m3
		3 ppm

**US. ACGIH Threshold Limit Values**

	Type	Value
MONOETHANOLAMINE (CAS 141-43-5)	STEL	6 ppm
	TWA	3 ppm

**Appropriate engineering controls**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash fountain and emergency showers are recommended.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Wear safety glasses with side shields (or goggles). Eye wash fountain is recommended.

**Skin protection**

**Hand protection**

Use protective gloves made of: Nitrile.

**Other**

Wear suitable protective clothing and gloves.

**Respiratory protection**

In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

When using, do not eat, drink or smoke. Do not get in eyes, on skin, on clothing. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties**

<b>Appearance</b>	CLEAR
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Not available.
<b>Odor</b>	CHEMICAL
<b>Odor threshold</b>	Not available.
<b>pH</b>	10.8
<b>Melting point/freezing point</b>	< 32 °F (< 0 °C)
<b>Initial boiling point and boiling range</b>	> 212 °F (> 100 °C)
<b>Flash point</b>	Not Applicable
<b>Evaporation rate</b>	Like water when diluted
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	100 % Water Miscible
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>pH in aqueous solution</b>	9.8 @ 5%
<b>Specific gravity</b>	1.149
<b>VOC ASTM D2369</b>	2 %

**10. Stability and reactivity**

<b>Reactivity</b>	May be corrosive to metals.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use. Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Heat, flames and sparks. Contact with incompatible materials.
<b>Incompatible materials</b>	Aluminum. Do not add sodium nitrite or other nitrosating agents which may form cancer causing nitrosamines. Avoid contact with oxidizers or reducing agents.
<b>Hazardous decomposition products</b>	Smoke, fumes, oxides of nitrogen, and oxides of carbon

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Prolonged inhalation may be harmful. Health injuries are not known or expected under normal use.
<b>Skin contact</b>	Causes skin irritation. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Ingestion</b>	May be harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics** Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

### Information on toxicological effects

**Acute toxicity** Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

Components	Species	Test Results
MONOETHANOLAMINE (CAS 141-43-5)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	1025 mg/kg
<i>Inhalation</i>		
LC50	Mouse	> 1210 mg/m <sup>3</sup>
	Rat	> 1.3 mg/l, 6 hours
<i>Oral</i>		
LD50	Guinea pig	620 mg/kg
	Mouse	700 mg/kg
	Rat	1515 mg/kg
TETRAPOTASSIUM PYROPHOSPHATE (CAS 7320-34-5)		
<b>Acute</b>		
<i>Dermal</i>		
LC50	Rabbit	> 4640 mg/kg
<i>Oral</i>		
LC50	Rat	4640 mg/kg

\* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation** Causes skin irritation. Prolonged skin contact may cause temporary irritation. Defatting, drying and cracking of skin.

**Serious eye damage/eye irritation** Causes serious eye irritation. Direct contact with eyes may cause temporary irritation.

### Respiratory or skin sensitization

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** Prolonged exposure may cause chronic effects.

Prolonged or repeated exposure may cause liver and kidney damage. These effects have not been observed in humans.

## 12. Ecological information

**Ecotoxicity** The 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.

Components		Species	Test Results
MONOETHANOLAMINE (CAS 141-43-5)			
<b>Aquatic</b>			
Fish	LC50	Goldfish (Carassius auratus)	170 mg/l, 96 hours
<i>Acute</i>			
Crustacea	EC50	Daphnia	65 mg/l, 48 hours
Fish	LC50	Goldfish (Carassius auratus)	170 mg/l, 96 hours
TETRAPOTASSIUM PYROPHOSPHATE (CAS 7320-34-5)			
<b>Aquatic</b>			
<i>Chronic</i>			
Fish	LC50	Oncorhynchus mykiss	> 100 mg/l, 96 hours

\* Estimates for product may be based on additional component data not shown.

**Persistence and degradability** No data is available on the degradability of this product.

### Bioaccumulative potential

#### Partition coefficient n-octanol / water (log Kow)

MONOETHANOLAMINE -1.31  
-2.3

**Mobility in soil** This product is miscible in water.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

**Disposal instructions** Consult authorities before disposal. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

## 14. Transport information

### DOT

**UN number** UN3267  
**UN proper shipping name** Corrosive liquid, basic, organic, n.o.s. (MONOETHANOLAMINE)  
**Transport hazard class(es)**  
**Class** 8  
**Subsidiary risk** -  
**Label(s)** 8  
**Packing group** III  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.  
**Special provisions** IB3, T7, TP1, TP28  
**Packaging exceptions** 154 (d)(1)  
**Packaging non bulk** 203  
**Packaging bulk** 241

Supplemental Information: This Product Concentrate is corrosive only to Aluminum. Per 49CFR 173.154(d)(1) Except for a hazardous substance, a hazardous waste, or a marine pollutant, a material classed as Class 8 Packing Group III, solely because of its corrosive effect on aluminum - is not subject to any other requirements of this subchapter when transported by motor vehicle or rail car in packaging that will not react or be degraded by the corrosive material.

#### IATA

<b>UN number</b>	UN3267
<b>UN proper shipping name</b>	Corrosive liquid, basic, organic, n.o.s. (MONOETHANOLAMINE)
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	No.
<b>ERG Code</b>	8L
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Allowed.
<b>Cargo aircraft only</b>	Allowed.

#### IMDG

<b>UN number</b>	UN3267
<b>UN proper shipping name</b>	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (MONOETHANOLAMINE)
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No.
<b>EmS</b>	F-A, S-B
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not established.

#### DOT



#### IATA; IMDG



## 15. Regulatory information

### US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. It may be reportable under the provisions of SARA Sections 311 and 312 if specific threshold criteria are met or exceeded.





Country(s) or region	Inventory name	On inventory or exempt (yes/no)*
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

## 16. Other information, including date of preparation or last revision

<b>Issue date</b>	03-31-2015
<b>Version #</b>	01
<b>Further information</b>	Not available.
<b>Disclaimer</b>	The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
<b>Revision Information</b>	Product and Company Identification: Product Codes Hazards Identification: US Hazard Categories Composition / Information on Ingredients: Ingredients Physical & Chemical Properties: Multiple Properties Transport Information: Proper Shipping Name/Packing Group Regulatory Information: United States Material Attributes & Uses; Experimental Data: Experimental Data HazReg Data: North America GHS: Classification