

RI-4288 -- RUST INHIBITOR

Section 1. Supplier Information

CMI Chemical Corporation
12336 Emerson Drive
Brighton, MI 48116
(248) 587-5600
Emergency Telephone: 1-800-424-9300

Section 2. Hazardous Ingredients

<u>Hazardous Component(s)</u>	<u>CAS #</u>	<u>PEL TWA</u>	<u>PEL Ceiling</u>	<u>TLV TWA</u>	<u>TLV STEL</u>	<u>MFG Limits</u>	<u>WGT %</u>
Triethanolamine	102-71-6	N/E	N/E	5 mg/m3	N/E	N/E	10 - 20
Triisopropanolamine	122-20-3	N/E	N/E	N/E	N/E	N/E	1 - 10

N/A = Not Applicable; N/E = Not Established; * = Mists; # = Skin; ' = Respirable Dust; " = Total Dust; ^ = Vapor; ** = Fumes; C = Ceiling Limit

All components of this product are listed on the Toxic Substances Control Act (TSCA) Inventory and the Canadian Domestic Substances List (DSL), or are exempt from the listing.

Section 3. Hazards Identification

Primary Routes of Entry

Inhalation: YES
Skin: YES
Ingestion: NO

Hazardous Materials Information System (HMIS) Ratings

Health:	* 1	0 = Minimal
Fire:	0	1 = Slight
Reactivity:	0	2 = Moderate
		3 = Serious
		4 = Severe
		* = Chronic Hazard

Signs of Symptoms of Exposure:

INHALATION: No effects of exposure expected. At very high concentrations only, this product may cause headache, nose and throat irritation, nausea and/or mental confusion.

SKIN: Material is mildly irritating to the skin. Prolonged or repeated contact may cause defatting and drying of the skin, resulting in irritation and dermatitis.

EYES: Vapors are slightly uncomfortable. Splashes can be irritating, will cause painful burning or stinging of eyes and lids, watering of eyes and inflammation of conjunctiva.

INGESTION: Ingestion of large amounts causes gastric disturbances. Nausea and vomiting may result.

Chemical Listed as Potential Carcinogens:

NTP: NO

IARC: NO

OSHA: NO

Target Organs: Eyes, skin, and kidney's.

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Section 4. Emergency And First Aid Procedures

INHALATION: If adverse effects such as dizziness, nausea, or irritation are noted, move person to fresh air. If not breathing, give artificial respiration. Get medical attention!

SKIN: Immediately wash skin with large amounts of soap and water. Remove contaminated clothing and shoes; wash before reuse. Get medical attention if irritation persists after washing.

EYES: Flush eyes immediately with water for at least 15 minutes. If irritation persists, call a physician.

INGESTION: If swallowed, dilute with water. Never give fluids if the victim is unconscious or having convulsions. Contact a physician immediately!

Section 5. Fire Fighting Measures

Flash Point: None to boiling. Method Used: Tagliabue Closed Cup

Flammable Limits in Air % by Volume: LEL: N/E UEL: N/E

Extinguisher Media: Water, dry chemical, carbon dioxide and foam.

Special Fire Fighting Procedures: Firefighters should wear a self-contained breathing apparatus with a full facepiece operated in pressure demand or other positive pressure mode, and protective clothing.

Unusual Fire And Explosion Hazards: Low fire hazard when exposed to heat and flame. Product is not flammable or combustible.

Section 6. Accidental Release Measures

If material is spilled, absorb with sand, earth, or similar inert material. Place in closed, labeled containers for proper disposal.

CERCLA (Superfund) Reportable Quantity (in lbs None in reportable quantities.

Section 7. Handling and Storage

Handling: Avoid contact with skin and eyes; wash thoroughly after handling. Avoid breathing vapor; use with adequate ventilation.

Storage: KEEP FROM FREEZING! Store in a dry location at room temperature. Keep container closed and maintain all original markings and labels.

Other: Do not reuse container without recycling or reconditioning. Handle empty containers as if they were full.

Section 8. Exposure Controls and Personal Protection

Respiratory Protection: Not required under normal conditions of use.

Local Exhaust: None normally required. Local exhaust may be needed under special circumstances such as poorly ventilated areas, evaporation from large surfaces, spraying, heating, etc.

Mechanical Exhaust: Mechanical ventilation should be sufficient to maintain exposure levels below exposure limits.

Protective Gloves: Wear chemical resistant gloves.

Eye Protection: Safety glasses with side shields. Do NOT wear contact lenses. Chemical goggles and/or faceshield should be worn where splashing is possible.

Other Protection: Eye wash and safety shower should be readily available.

Hygienic Practices: Avoid contact with skin and avoid breathing vapors or mist. Do not eat, drink, or smoke while using this product. Wash up prior to eating,

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drinking, or using the restroom.

Section 9. Physical and Chemical Properties

Boiling Point:	~ 212 ° F	Degree of water solubility:
Specific Gravity (H ₂ O=1):	1.05-1.07	Negligible = Less than 0.1%
Vapor Pressure (mm Hg):	Approximately water.	Slight = 0.1% - 1%
Vapor Density (air=1)	Approximately water.	Moderate = 1% - 10%
Solubility in Water:	Complete.	Appreciable = More than 10%
Reactivity in Water:	None.	Complete = 100%
Weight per Gallon (lb/gal):	8.7-8.9 lbs/gal	
% Volatile by Volume:	61-65	
% Solid by Weight:	35-39	
Appearance and Odor:	Dark blue, odorless liquid.	
Theoretical VOC: (>0.1 mm Hg @ 20 ° C)	0 lbs/gal	
Analytical VOC : (EPA method 24)	0.2-0.3 lbs/gal	
pH:	8.2 - 8.6	

Section 10. Stability and Reactivity

Stability: Stable. Hazard Polymerization: Will not occur.

Conditions to Avoid: Unknown.

Incompatibility (Materials to Avoid): Strong oxidizing agents and acids. DO NOT ADD NITRITES! May form nitrosamines (carcinogen).

Hazardous Decomposition Products: Various organic compounds, ammonia, aldehydes, oxides of nitrogen, and oxides of carbon.

Section 11. Toxicological Information

Triethanolamine (TEA) [CASRN 000102-71-6]

ACUTE TOXICITY

Oral, LD50 (Rat; female) = 4.92 ml/kg Dermal, LD50 (Rabbit) > 16 ml/kg; 24 h occluded.
Oral, LD50 (Rat; male) = 8.57 ml/kg

SIGNIFICANT DATA WITH POSSIBLE RELEVANCE TO HUMANS

Recent analyses of Triethanolamine for N-nitrosodiethanolamine have not revealed its presence at the detection limit of the test (20ppb). However, amines may react with nitrites or other nitrosating agents to form nitrosamines. Some nitrosamines have been shown to be carcinogenic in laboratory animals. [20, 2-19,4,0,5,6-062300]

Triisopropanolamine [CASRN 000122-20-3]

ACUTE TOXICITY Oral LD50 (rat) = 4,730 mg/kg Eye irritation (Draize) - Severe
Oral LD50 (mouse) = 2,520 mg/kg Oral LD50 (rabbit) = 11 g/kg [0,2-19-062900]

Section 12. Ecological Information

Triethanolamine (TEA) [CASRN 000102-71-6]

AQUATIC TOXICITY Expected to have low toxicity to aquatic species.

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MOBILITY Not expected to selectively partition and absorb to soil or sediments.
BIODEGRADABILITY Readily biodegradable and are not expected to persist in the environment.
POTENTIAL TO BIOACCUMULATE Not expected to bioaccumulate. [7,20-19,J,J,11,5,6,I,F-092299]
Triisopropanolamine [CASRN 000122-20-3]

ECOTOXICTY 48 h EC/LC 50 (Daphnia) > 500 mg/l 96 h LC50 (Leuciscus idus) = 2200 mg/l - 4600 mg/l
72 h EC/LC 50 (Algae) = 35 mg/l

FATE: log Pow = -0.015 [0,2-19-062900]

Section 13. Disposal Considerations

Waste Disposal Methods (Federal, State, Local):

In accordance with all federal, state and local requirements.

RCRA Hazardous Waste Number: N/A

Section 14. Transport Information

Hazardous Material Description:

(Proper shipping name, hazard class, hazard ID#, packing group)

Domestic ground non-bulk: NOT REGULATED

Domestic ground bulk: NOT REGULATED

International: NOT REGULATED

Section 15. Regulatory Information

SARA 313 Information This product contains the following chemical(s) above deminis concentrations and may be subject to reporting under section 313:
None.

Section 16. Other Information

This MSDS contains revisions in the following sections: New format

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Revised by: Andrew J. Thomas Chemist

The development of this Material Safety Data Sheet (MSDS) relies upon information provided to us by each of our raw material suppliers. This MSDS will be updated as changes occur to their MSDS(s). We believe the recommendations and technical information contained herein to be accurate. However, they are given without warranty or guarantee, expressed or implied, and we assume no responsibility for losses or damage, direct or indirect, as a result of their use.