



North Metal and Chemical Company

1. Company Identification and Product Hazard Overview:

Product Name : Tolyltriazole; 1H-Benzotriazole, 6(or 7)-methyl-.
Synonyms : TTA 100%; TT 100%
Product Use : Copper corrosion inhibitor
Manufactured for : NORTH Metal and Chemical Company
P. O. Box 1985 609 E. King St.
York, PA USA 17405 York, PA USA 17403
Tel: 717-845-8646 Fax: 717-846-7350
Email: north@nmc-nic.com Website: www.nmc-nic.com

In Case of Emergency or Spill Call CHEMTREC (24 Hours): 1-800-424-9300 (USA)

2. Hazard Identification:

GHS Classification:

Acute Toxicity - Oral (Cat. 4), Dermal (Cat. 4), Inhalation (Cat. 4)
Eye Irritation (Category 2A)
Acute Aquatic Toxicity (Category 3)
Chronic Aquatic Toxicity (Category 3)

Signal Word: Warning

Pictograms: Exclamation Mark



Hazard Statements:

H302 + H312 +
H332 : Harmful if swallowed. Harmful in contact with skin. Harmful if inhaled.
H319 : Causes serious eye irritation.
H402 + H412 : Harmful to aquatic life with long lasting effects

Precautionary Statements:

Prevention:

P280 : Wear protective gloves/protective clothing such as apron, boots and safety glasses with side shields.
P261 + P271 : Avoid breathing dust and/or mist. Use in a well-ventilated area.
P264 : Wash all affected body parts thoroughly after handling.
P270 : Do not eat, drink, or smoke when using this product.
P273 : Avoid release to the environment.

Response:

P302 + P352 : IF ON SKIN: Wash with plenty of water.
P304 + P340 : IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301 + P312 : IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell
P330 : Rinse mouth
P305 + P351 +
P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 : If eye irritation persists: Get medical advice/attention
P312 : Call a POISON CENTER/doctor if you feel unwell.
P391 + P501 : Collect Spillage. Dispose of contents/containers in accordance with local regulations

3. Composition/Information on Ingredient:

Chemical Name : Tolyltriazole; 1H-Benzotriazole, 6(or 7)-methyl-
Chemical Family : Azoles
Chemical Formula : C₇H₇N₃

Substance:	CAS Number:	EC	Compo. (%)
Tolyltriazole	29385-43-1	249-596-6	> 99.0

4. First Aid Measures:

General recommendation: If victim is unconscious, get medical attention immediately. Place the unconscious victim in recovery position and maintain an open airway. Loosen tight clothing.

Eyes : Flush skin with running water for at least 15 minutes, periodically lifting upper and lower lids. Remove any contact lenses if safe to do so and while rinsing. Get medical attention immediately.

Skin : Wash skin with plenty of running water. Remove contaminated clothing. Get medical attention if needed. Clean and dry contaminated clothing thoroughly before reuse.

Ingestion : If the product is swallowed, call doctor/physician and get medical attention immediately. Do not induce vomiting. Never give anything by mouth to an unconscious person.

Inhalation : If safe to do so, remove individual from further exposure. Keep warm and at rest. If breathing has stopped give artificial respiration. Get medical attention/consult a physician.

PPE for first responders : Gloves, safety goggles, boots and dust/vapor respirator.

5. Fire Fighting Measures:

Flash Point (°C) : > 100 °C

Flammable Limits : Not available.

Flammable Class : Not available.

General Hazard : Evacuate personnel downwind in-order to avoid inhalation of irritating and/or harmful fumes and smoke.

Specific Hazard(s) : Slight fire hazard. Dust/air mixtures may ignite or explode.

Extinguishing Media : Water spray, alcohol resistant foam, dry chemical or carbon dioxide. Appropriate for the surrounding area. For large fires, flood with fine water spray or use regular foam.

Hazardous Combustion Products : Fire may cause evolution of oxides or carbon and nitrogen. Hydrogen cyanide can be formed in reducing environments during a fire. Ambient fire may liberate hazardous vapors.

Fire Fighting Procedures: Evacuate area and fight fire from safe distance or a protected location. Move fire-exposed containers, if allowable without risk and without sacrificing the safety of the firefighters and others. Cool exposed containers with water spray (only water) to prevent over heating from a safe distance. Keep the fire exposed area isolated. If possible, firefighters should control run-off water to prevent environmental contamination. Hazardous decomposition and combustion products such as nitrogen and carbon oxides can be formed if product is burning.

Fire Fighting Equipment: Respiratory and eye protection are required for fire fighting personnel. Full protective equipment (bunker gear) and self-contained breathing apparatus (SCBA) should be used for all fires.

Sensitivity to Mechanical Impact: Not sensitive

Sensitivity to Static Discharge: Not sensitive

6. Accidental Release Measures:

Protective Gear for Personnel:

For Small Spill : Safety glasses or chemical splash goggles, chemically resistant gloves, chemically resistant boots, and any appropriate body protection to minimize direct contact to the skin. Wear respiratory protection. Avoid dust formation. Avoid breathing dust.

For Large Spill : Triple gloves (rubber and nitrile over latex), chemical resistant suit, boots, hard hat, full face mask/an air purifying respirator (NIOSH approved). Self contained breathing apparatus must be worn in situations where fumigant gas generation and low oxygen levels are a consequence of contamination from the leak.

General Procedure : Remove all sources of ignition from spill area. Ventilate area. Do not let chemicals/waste enter land or water environment.

Spill Clean-up Procedures:

For Small Spill : In the event of a small spill, the spill should be swept up or contained with an absorbent pad and placed in a properly labeled waste container immediately. Wash the spill area and contain the waste in a labeled waste container without letting the wash enter the sewer/environment. Dispose the spill/waste according to state, federal, and local hazardous waste regulation

For Large Spill : In the event of a large spill, contain the spill immediately and dispose the spill/waste according to state, federal, and local hazardous waste regulation. Do not let chemical/waste enter the environment.

Environmental Precaution

:Water spill - use appropriate containment to avoid run off or release to sewer or other waterways.
Land spill - use appropriate containment to avoid run off or release to ground.

General precaution : Remove containers of strong acid, alkali and incompatible materials from the release area. See section 10 for more information on incompatible materials.

Release Notes : If spill could potentially enter any waterway, including intermittent dry creeks, contact local authorities.

7. Handling and Storage:

Handling : Use appropriate personal protective equipment as specified in Section 8. Handle in a well-ventilated area. Handle in a manner consistent with good industrial/manufacturing techniques and practices. Avoid formation of dust and aerosols. Keep away from sources of ignition. Keep away from combustible materials. Avoid contact with skin and eyes. Remove contaminated clothing and protective equipment before entering eating areas.

Storage : Store in a cool, dry well-ventilated area. Keep containers tightly closed when not in use. Keep product isolated from incompatible materials/conditions.

8. Exposure Controls and Personal Protection:

Engineering Controls : Use appropriate engineering controls to minimize exposure to vapors/dust generated via routine use. Maintain adequate ventilation of workplace and storage areas.

Personal Protective Equipment

: **Eyes and face:** Wear NIOSH approved safety glasses with side shields or goggles when handling this material.

Skin: Avoid direct contact with skin. Wear chemically resistant gloves, apron, boots or whole bodysuit to prevent skin contact.

Respiratory: Avoid breathing vapor or mist. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) as a back up to engineering controls. Use NIOSH approved respiratory protection equipment. If used, full face-piece replaces the need for face shield and/or chemical goggles. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application.

Work Hygienic Practices : Facilities storing or using this material should be equipped with emergency eyewash, and a safety shower. Good personal hygiene practices should always be followed.

Exposure Limits:

Substance:	CAS No.:	OSHA STEL	OSHA PEL	ACGIH TLV	ACGIH STEL
Tolyltriazole	29385-43-1	N/A	N/A	N/A	N/A

9. Chemical and Physical Properties:

Appearance	: Solid Granular	Evaporation Rate	: Not available
Odor	: Faint to no odor	Lower Explosive Limit	: Not available
Odor threshold	: Not available	Upper Explosive Limit	: Not available
Color	: Off White to Slightly Yellow	Vapor Pressure	: Not available
pH	: 5.5 - 6.5 (1% solution)	Vapor Density	: Not available
Melting Point	: 76 - 87 °C	Relative Density	: 1.13 g/cm ³ @ 100 °C
Freezing Point	: 80-82 °C	Solubility	: Soluble
Boiling Range	: 160 °C @ 2.67 hPa	Partition Coefficient	
Flash Point	: >100°C	n-octanol/water	: Log P _{ow} : 1.71
Molecular Weight	: 133.15	Auto Ignition Temp.	: Not available

10. Stability and Reactivity:

Stability	: The product is stable under recommended storage conditions.
Polymerization	: Polymerization will not occur.
Hazardous Decomposition Products	: Products formed under fire conditions - Nitrogen oxides (NO _x), Carbon oxides (CO _x). Hydrogen Cyanide may be formed when the product is burning under reducing conditions.
Materials to Avoid	: Strong oxidizing agents, Alkalis, Amines, Nitrites, and Sulphites
Conditions to Avoid	: Avoid exposure to extreme temperatures, incompatible materials, exposure to air, combustible materials, organic material, exposure to moist air or water.

11. Toxicological Information:

Acute Oral Toxicity:

LD₅₀ Oral - Rat: 675 mg/kg

Acute Inhalation Toxicity:

LC₅₀ Inhalation - Rat: >1.73 mg/L (1 Hour, EPA HPVIS)

Remarks: Effect observed on necropsy was pulmonary irritation.

Acute Dermal Toxicity:

LD₅₀ Dermal - Rabbit: >4000 mg/kg

Corrosion/Irritation:

Skin : Not Irritating - Rabbit (EPA HPVIS).

Eyes : Mild Irritation - Rabbit (RTECS)

Carcinogenicity : No data available.

Sensitization : No data available.

Reproductive Effects : No data available.

Mutagenicity : No data available.

Teratogenic Effects : No data available.

Routes of Exposure : Eyes, Skin, Inhalation, Ingestion

Potential Health Effects:

Eyes : Causes serious eye irritation

Skin : May be harmful if absorbed through skin. Causes skin irritation.

Inhalation : May be harmful if inhaled. Causes respiratory tract irritation.

Ingestion : Toxic if swallowed.

Symptoms of overexposure:

Eyes : Can lead to serious eye damage.

Skin : Chronic exposure can lead to eczematous reactions (RTECS) - as observed in patch testing.

Inhalation : Prolonged exposure leads to severe local respiratory damage.

Ingestion : Toxic if swallowed. Related compounds such as Benzotriazole have shown to cause central nervous depression.

RTECS: DM130000 (CAS No.: 29385-43-1)

12. Ecological Information:

All work practices must be aimed at eliminating environmental contamination.

Biodegradability : No data available.

Bioaccumulative Potential : No data available.

Terrestrial Ecotoxicity : This material can be harmful or fatal to contaminated plants or animals, especially if large volumes are released into the environments.

Aquatic Ecotoxicity (Acute)

Fish Toxicity : *B. rerio* LC₅₀ (96h) - 65 mg/L
S. gairdneri LC₅₀ (96h) - 21.4 mg/L

Aquatic Invertebrates: *D. magna* EC₅₀ (48h) - 35.4 mg/L

Aquatic Plants : *S. subspicatus* EC₅₀ (72h) - 62 mg/L (growth)
S. subspicatus EC₅₀ (72h) - 32 mg/L (biomass)

Mobility in Soil : No data available.

Other Adverse Effects : No data available.

13. Disposal Considerations:

Disposal Method : Dispose of waste at an appropriate waste disposal facility according to current applicable laws and regulations.

For Large Spills : Contain material and call local authorities for emergency assistance.

Product Disposal : Dispose of at a supervised incineration facility or an appropriate waste disposal facility according to current applicable local, state and federal laws, regulations and product characteristics at time of disposal.

Empty Container : Contaminated container should be labeled and disposed in accordance to local, state and federal laws and regulations.

General Comments : Refer to section 6, accidental release measures for additional information.

14. Transport Information:

Regulatory Information	UN No.	Proper Shipping Name	UN Class	Packing Group
US DOT		NOT DOT REGULATED		

15. Regulatory Information:

U.S. FEDERAL REGULATIONS:

TSCA: All components of this product are listed on the TSCA inventory.

CERCLA: No components of this product are listed.

SARA TITLE III (EPCRA) Section 313: No components of this product are listed

SARA TITLE III (EPCRA) Section 311/312:

Acute health hazard - Yes

Chronic health hazard - No

Fire Hazard - No

Pressure Hazard - No

Reactivity Hazard - No

16. Other Information:

HMIS and NFPA Rating Scale:

HMIS: Hazardous Materials Identification System

Numeric Scale for Health (Blue), Flammability (Red), and Physical Hazard (Yellow):

HMIS Rating:*

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0
PERSONAL PROTECTION	E

RATING	HEALTH	FIRE HAZARD	PHYSICAL HAZARD
0	No significant risk to health	Will not burn	Product stable under ambient temperature and condition.
1	Can cause irritation or minor reversible injury.	Must be preheated to burn	Product can become unstable at high temperatures and pressures.
2	Can cause temporary or residual injury	Ignites when moderately heated	Product can become unstable and cause violent chemical reaction at normal pressures and temperatures
3	Can cause serious injury	Ignition occurs at normal temperature	Product capable of forming explosive mixtures and is capable of detonation in presence of strong initiating source.
4	Can be lethal from single or repeated exposure.	Extremely flammable	Product is highly explosive and unstable. Exothermic reactions possible with decomposition, polymerization, reaction with water or self reaction

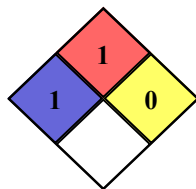
Personal Protection Code E: Gloves + Safety Goggles + Dust Respirator

NFPA: National Fire Protection Association

Numeric Scale for Health (Blue), Fire Hazard (Red), and Reactivity (Yellow):

Special (White): NONE

NFPA Rating:*



RATING	HEALTH	FIRE HAZARD	REACTIVITY
0	Minimal Hazard	Will not burn	Normally Stable
1	Can cause significant irritation	Must be preheated to burn	Unstable at high temperatures
2	Can cause temporary incapacitation or residual injury	Ignites when moderately heated	Normally unstable. Can readily go under violent chemical reaction but do not detonate.
3	Can cause permanent injury.	Ignition occurs at normal temperature	Capable of detonation, or of explosive reaction, but requires a strong ignition source.
4	Can be lethal.	Extremely flammable	May explode at normal temperatures and pressures

Revision Date: October 24, 2018

Reason for Revision: Added additional physical/chemical properties to Section 9.

The information contained in this SDS was obtained from current and reliable sources. However, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions or handling, storage and disposal of this product are beyond the control of the manufacturer/supplier, they are not held responsible for loss, injury, and expense arising out of the product's use. No warranty, expressed or inferred, regarding the product described in this SDS shall be created or inferred by any statement in this SDS