



SAFETY DATA SHEET TOLYLTRIAZOLE REVISION 5, DATE 15 FEB 20

1. IDENTIFICATION

Product Name	Tolyltriazole
Other Names	Methyl-1H-Benzotriazole; Toly triazole
Uses	Industrial formulation of lubricant additives, lubricants and greases; corrosion inhibitors and de-icing products.
Chemical Family	No Data Available
Chemical Formula	C ₇ H ₇ N ₃
Chemical Name	1H-Benzotriazole, methyl-
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust)

Not Scheduled



Globally Harmonised System

Hazard Classification	Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Hazard Categories	Acute Toxicity (Oral) - Category 4 Acute Hazard To The Aquatic Environment - Category 3 Long-term Hazard To The Aquatic Environment - Category 3

Pictograms



Signal Word	Warning
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Hazard Statements	H302	Harmful if swallowed.
	H412	Harmful to aquatic life with long lasting effects.

Precautionary Statements	Prevention	P273	Avoid release to the environment.
		P264	Wash hands thoroughly after handling.
		P270	Do not eat, drink or smoke when using this product.
	Response	P391	Collect spillage.
		P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
		P330	Rinse mouth.
	Disposal	P501	Dispose of contents/container in accordance with local / regional / national / international regulations.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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Safe Work Australia

National Guide for Classifying Hazardous Chemicals under the Model WHS Regulations

Hazard Classification	Hazardous according to the criteria of Safe Work Australia under Model WHS Regulations
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3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
1H-Benzotriazole, methyl-	C7H7N3	29385-43-1	>=99 - 100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth, then drink plenty of water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Call a Poison Centre or doctor/physician for advice.
Eye	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.
Skin	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs, get medical advice/attention.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, get medical advice/attention. Apply resuscitation if victim is not breathing - Do not use direct mouth-to-mouth method if victim ingested or inhaled the substance; use alternative respiratory method or proper respiratory device - Administer oxygen if breathing is difficult.
Advice to Doctor	Treat symptomatically. Symptoms of poisoning may occur after several hours. Medical observation for at least 48 hours after the accident is recommended.
Medical Conditions Aggravated by Exposure	No information available.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.
Flammability Conditions	May burn but does not ignite readily.
Extinguishing Media	Use dry chemical, Carbon dioxide (CO ₂), foam or water spray for extinction.
Fire and Explosion Hazard	Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Hazardous Products of Combustion	Fire may produce irritating, toxic and/or corrosive fumes, including Carbon oxides, Nitrogen oxides, Hydrogen cyanide (HCN).
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may pollute waterways.
Personal Protective Equipment	Wear self-contained breathing apparatus (SCBA) and chemical splash suit. SCBA and structural firefighter's uniform may provide limited protection.
Flash Point	190 °C
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. ELIMINATE all ignition sources. Do not touch or walk through spilled material. Avoid generating dust. Avoid breathing dust and contact with eyes, skin and clothing.
Clean Up Procedures	Collect material (sweep up) and place in a suitable container for disposal (see SECTION 13).
Containment	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Prevent dust cloud.
Decontamination	Wash contaminated area with plenty of water.
Environmental Precautionary Measures	Prevent entry into drains and waterways.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away.
Personal Precautionary Measures	Use personal protective equipment as required (see SECTION 8).

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Minimise dust generation and accumulation. Avoid breathing dust and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Keep away from heat and sources of ignition - No smoking. Keep away from foodstuffs and incompatible materials (see SECTION 10).
Container	Keep in original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product. For dusts from solid substances without specific occupational exposure standards: - Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m ³ (measured as inhalable dust). - New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m ³ ; TWA = 3 mg/m ³ (respirable dust).
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
Personal Protection Equipment	- Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Dust mask/particulate filter respirator (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Tightly sealed safety glasses. - Hand protection: Handle with gloves. Recommended: Protective gloves, e.g. Nitrile rubber (NBR), Polyvinyl chloride (PVC), Polychloroprene. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Protective work clothing.
Special Hazards Precautions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash hands before breaks and at the end of the work. Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Granular
Odour	Weak/faint
Colour	Off-white, beige
pH	5.0 - 6.0
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	Decomposes
Melting Point	76 - 87 °C
Freezing Point	No Data Available
Solubility	4.05 g/L in water 25°C

Specific Gravity	1.266
Flash Point	190 °C
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	>=195 °C
Density	1.2648 - 1.2672 g/cm3
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	log Pow: 1.079 - 1.081
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	May burn but does not ignite readily.
Reactions That Release Gases or Vapours	Fire/decomposition may produce irritating, toxic and/or corrosive fumes, including Carbon oxides, Nitrogen oxides, Hydrogen cyanide (HCN).
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	No information available.
Chemical Stability	Stable under recommended storage and handling conditions.
Conditions to Avoid	Avoid generating dust. Keep away from heat and sources of ignition.
Materials to Avoid	Incompatible/reactive with strong oxidising agents, strong acids, alkaline materials.
Hazardous Decomposition Products	Fire/decomposition may produce irritating, toxic and/or corrosive fumes, including Carbon oxides, Nitrogen oxides, Hydrogen cyanide (HCN).
Hazardous Polymerisation	No information available.

11. TOXICOLOGICAL INFORMATION**General Information**

- Acute toxicity: Harmful if swallowed. May be harmful in contact with skin.
- Skin corrosion/irritation: Not irritating to the skin.
- Eye damage/irritation: Slightly irritating to the eyes.
- Respiratory/skin sensitisation: The substance is not skin-sensitising.
- Germ cell mutagenicity: No adverse effect observed (negative) [ECHA].
- Carcinogenicity: According to present knowledge, no CMR-effects known.
- Reproductive toxicity: No information available.
- STOT (single exposure): No information available.
- STOT (repeated exposure): Not classified.
- Aspiration toxicity: No information available.

Acute**Ingestion**

- Acute toxicity (Oral):
- LD50, Rat: 720 mg/kg [OECD 401; Supplier's SDS].

Other

- Acute toxicity (Dermal):
- LD50, Rat: >2,000 mg/kg bw. [ECHA].

Chronic**Ingestion**

- Sub-acute/chronic toxicity (Oral):
- NOAEL, Rat: 150 mg/kg bw/d (28 d) [OECD 407; Supplier's SDS].

Carcinogen Category

None

12. ECOLOGICAL INFORMATION**Ecotoxicity**

- Aquatic toxicity:
- LC50, Fish (Brachydanio rerio): 42.2 mg/l (96 h).
 - EC50, Algae (Scenedesmus subspicatus): 32 mg/l (72 h).

Persistence/Degradability

Not readily biodegradable.

Mobility

No information available.

Environmental Fate

Harmful to aquatic life with long lasting effects - Avoid release to the environment.

Bioaccumulation Potential

No information available.

Environmental Impact

No Data Available

13. DISPOSAL CONSIDERATIONS**General Information**

Dispose of contents/container in accordance with local/regional/national regulations.

Special Precautions for Land Fill

No information available.

14. TRANSPORT INFORMATION**Land Transport (Australia)**

ADG Code

Proper Shipping Name

Tolytriazole

Class

No Data Available

Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (Malaysia)

ADR Code

Proper Shipping Name	Tolytriazole
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	Tolytriazole
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (United States of America)

US DOT

Proper Shipping Name	Tolytriazole
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Sea Transport

IMDG Code

Proper Shipping Name	Tolytriazole
Class	No Data Available

Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No
Comments	NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport

IATA DGR

Proper Shipping Name	Tolytriazole
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for AIR transport.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	Not Scheduled

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	HSR002503 - Additives Process Chemicals and Raw Materials (Subsidiary Hazard) Group Standard 2020
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National/Regional Inventories

Australia (AIC)	Listed
Canada (DSL)	Listed
Canada (NDSL)	Not Listed
China (IECSC)	Listed
Europe (EINECS)	249-596-6

Europe (REACH)	Not Determined
Japan (ENCS/METI)	Listed
Korea (KECI)	KE-23495
Malaysia (EHS Register)	Not Listed
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Listed
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Listed
USA (TSCA)	Listed

16. OTHER INFORMATION

Related Product Codes	TOLYTR0900, TOLYTR1000, TOLYTR1001, TOLYTR1002, TOLYTR1003, TOLYTR1004, TOLYTR1100, TOLYTR1800, TOLYTR1801, TOLYTR1802, TOLYTR1803, TOLYTR1804, TOLYTR3000, TOLYTR3001, TOLYTR3002, TOLYTR3003, TOLYTR3100, TOLYTR3101, TOLYTR3102, TOLYTR3200, TOLYTR3300, TOLYTR3500, TOLYTR4000
Revision	5
Revision Date	15 Feb 2020
Key/Legend	<p>< Less Than > Greater Than AICS Australian Inventory of Chemical Substances atm Atmosphere CAS Chemical Abstracts Service (Registry Number) cm² Square Centimetres CO₂ Carbon Dioxide COD Chemical Oxygen Demand deg C (°C) Degrees Celcius EPA (New Zealand) Environmental Protection Authority of New Zealand deg F (°F) Degrees Fahrenheit g Grams g/cm³ Grams per Cubic Centimetre g/l Grams per Litre HSNO Hazardous Substance and New Organism IDLH Immediately Dangerous to Life and Health immiscible Liquids are insoluable in each other. inHg Inch of Mercury inH₂O Inch of Water K Kelvin kg Kilogram kg/m³ Kilograms per Cubic Metre lb Pound LC₅₀ LC stands for lethal concentration. LC₅₀ is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours. LD₅₀ LD stands for Lethal Dose. LD₅₀ is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals. ltr or L Litre m³ Cubic Metre mbar Millibar mg Milligram mg/24H Milligrams per 24 Hours</p>

mg/kg Milligrams per Kilogram

mg/m³ Milligrams per Cubic Metre

Misc or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.

mm Millimetre

mmH₂O Millimetres of Water

mPa.s Millipascals per Second

N/A Not Applicable

NIOSH National Institute for Occupational Safety and Health

NOHSC National Occupational Health and Safety Commission

OECD Organisation for Economic Co-operation and Development

Oz Ounce

PEL Permissible Exposure Limit

Pa Pascal

ppb Parts per Billion

ppm Parts per Million

ppm/2h Parts per Million per 2 Hours

ppm/6h Parts per Million per 6 Hours

psi Pounds per Square Inch

R Rankine

RCP Reciprocal Calculation Procedure

STEL Short Term Exposure Limit

TLV Threshold Limit Value

tne Tonne

TWA Time Weighted Average

ug/24H Micrograms per 24 Hours

UN United Nations

wt Weight