

# SAFETY DATA SHEET

**TOLCIDE® MBT**

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Date: 24/02/2003

Version: 1.02 UK

Cancels and replaces version: UK

## 1 Product and company identification.

PRODUCT NAME : TOLCIDE® MBT  
Use : Biocides.  
(For further information, refer to the product technical data sheet).  
SUPPLIER :  
Name : Rhodia Consumer Specialties Limited  
Address : P.O.Box 9837  
Oldbury  
West Midlands  
B69 4WD, UK  
Telephone number : 0044 121 541 3717 (UK: 0121 541 3717)  
Telefax number : 0044 121 541 3853 (UK: 0121 541 3853).  
**EMERGENCY TELEPHONE NUMBER : 00 44 117 982 3611 (UK: 0117 982 3611)**

## 2 Composition / information on ingredients

>> SUBSTANCE  
Common chemical name : METHYLENE DITHIOCYANATE  
Synonyms : Methylene bis thiocyanate  
MBT.  
Further data : EINECS N°: 228-652-3  
CAS number : 6317-18-6.

## 3 Hazards identification

### MOST IMPORTANT HAZARDS

Adverse human health effects : Very toxic by inhalation.  
Toxic if swallowed.  
Corrosive. Causes burns.  
May cause sensitization by skin contact.  
Main symptoms : Inhalation may be fatal.  
Environmental effects : Very toxic to aquatic organisms.  
Physical and chemical hazards  
- Fire or explosion : NO particular fire or explosion hazard.

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Classification/Specific hazards : According to EC regulations, this product is classified as:  
- VERY TOXIC.  
- DANGEROUS FOR THE ENVIRONMENT.

## 4 First-aid measures

Inhalation : Quickly move the person away from the contaminated area.  
Make the person sit down and rest.  
Call a doctor immediately, even if there are no immediate symptoms.

Skin contact : Wash immediately with plenty of soap and water.  
Remove all contaminated clothing and footwear.  
Call a doctor immediately, even if there are no immediate symptoms.

Eye contact : IMMEDIATELY rinse with plenty of water for a prolonged period,  
(at least 15 minutes) whilst keeping the eyes wide open.  
Consult an eye specialist immediately.

Ingestion : Rinse mouth out with water.  
Place the affected person in a reclining position and make him/her rest.  
Call a doctor immediately, even if there are no immediate symptoms.

Notes to the physician : Any respiratory difficulties must be treated immediately.

Further information : Keep under observation, even if there are no immediate symptoms.

## 5 Fire - fighting measures

Extinguishing media

- Suitable : All extinguishing agents can be used (water, foam, powders, carbon dioxide, sand ...).

- Not suitable : None. If there is a fire close by, use suitable extinguishing agents.

Specific hazards : Toxic gases or vapours are released. For further information, refer to section 10: "Stability and Reactivity".

Protection of fire-fighters : Self-contained breathing apparatus.  
Complete protective clothing.

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## 6 Accidental release measures

### Personal precautions

- : Avoid contact with eyes, skin and respiratory system  
If spillage occurs on the public highway, indicate the danger and notify the authorities (police, fire brigade ).
  - full protective clothing and equipment.
  - respiratory protective device.
- For further information refer to section 8 "Exposure-controls/personal protection".

### Environmental precautions

- : Prevent the product from spreading into the environment.  
DO NOT discharge into drains or rivers (product is hazardous for the environment).  
Contain the spilled material by bunding.  
Control the dusts with a fine water spray.

### Methods for cleaning up

#### - Recovery

- : Avoid creating or spreading dust.  
Recover as much of the product as possible.  
Collect up the product and place it in a spare container: - suitably labelled.  
Keep the recovered product for subsequent disposal.

#### - Cleaning/Decontamination

- : Wash non-recoverable remainder with large amounts of water.  
Recover the cleaning water for subsequent disposal.

#### - Disposal

- : Do NOT discharge into drains. Dispose of all contaminated materials in accordance with current regulations.  
Place in an appropriate container and dispose of the contaminated material at a licensed site.
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## 7 Handling and storage

### HANDLING

#### Technical measures

- : Ventilation.

#### Measures

- : Avoid exposure:  
Work in a well-ventilated area. Avoid the formation or spread of dust in the atmosphere.  
Do NOT handle without gloves.

#### Safe handling advice

- : Ensure that there is a suitable ventilation system. Do NOT handle in a confined space.  
Handle and use in accordance with good occupational hygiene and safety practice.  
Do not mix with incompatible materials (See list section 10).

### STORAGE

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Technical measures	:	Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.
Storage conditions		
- Recommended	:	Store: <ul style="list-style-type: none"><li>- away from direct sunlight.</li><li>- in a cool, well-ventilated area.</li><li>- the container tightly closed and dry.</li></ul>
- To be avoided	:	Store away from incompatible materials.
Incompatible products	:	Strong oxidizing agents. Alkalis and caustic products.
Packaging	:	- Polyethylene liner inside a fibre-board drum.
Packaging materials		
- Recommended	:	
- Not suitable	:	Ordinary steel.

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## 8 Exposure controls / personal protection

Engineering measures	:	Ensure good ventilation of the work station.
Control parameters		
Occupational exposure limits		
- Limits (UK)	:	No specific limits.
Personal protective equipment		
- Respiratory protection	:	Respiratory protective device with a particle filter.
- Hand protection	:	Butadiene nitrile rubber gloves.
- Eye protection	:	Safety spectacles with side shields.
- Skin and body protection	:	Protective clothing. Safety foot-wear.
Collective emergency equipment	:	Personal protective equipment available close by in case of emergency. Eye fountain.

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## 9 Physical and chemical properties

### APPEARANCE

- Physical state	:	Solid.
- Colour	:	white - pale yellow.
Odour	:	irritating.
pH	:	5.07 (Aqueous dispersion - 25°C).

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## Specific temperatures

- Melting : Melting range: 105.4 to 106.8°C.
- Boiling : Decomposes before boiling.

## Flammability characteristics

- Flash point : Not applicable.

Oxidizing properties : Not applicable

Vapour pressure : 0.00016 hPa, at 26°C.

Relative density (water = 1) : 1.4679 - 1.5199 at 20°C.

Specific gravity : 820 kg/m3, at 25°C.

## Solubility

- in water : Approx. 0.28g per 100g of water, at 25°C.
- in organic solvents : 5.1 g/100ml at 25 °C. - methanol.

Octanol/water partition coefficient : 0.34 (log POW) at 25 °C.

## 10 Stability and reactivity.

Stability : Stable at ambient temperature and under normal conditions of use.

### Hazardous reactions

- Conditions to avoid : Decomposes: above 110°C.  
Decomposition may be violent. above 205°C.
- Materials to avoid : - oxidizing agents.  
- alkalis and caustic products.
- Hazardous decomposition products : On combustion or on thermal decomposition (pyrolysis) releases:  
toxic and corrosive vapours. (Sulphur oxides). (Nitrogen oxides).  
(Carbon oxides (CO + CO2)). (Formaldehyde).

## 11 Toxicological information

### Acute toxicity

- : LC 50 inhalation (Rat) / 4 h : 0.032 mg/l. for males and females  
Very toxic by inhalation.  
LD 50 skin (Rabbit): > 2000 mg/kg. for males and females  
LD 50 oral (Rat) : 81.4 mg/kg. for males and females  
Toxic if swallowed.

### Acute symptoms

- : On inhalation:  
Immediate effects : Coughing. Difficulty in breathing. May cause  
respiratory arrest.  
Delayed effects : Collapse. Coma. In extreme cases, DEATH.

### Local effects

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	:	Corrosive to rabbits on cutaneous application. (Published data). Risk of serious damage to eyes (Published data).
Sensitisation	:	May cause sensitization on contact with skin. (Buehler method)
Repeated dose toxicity	:	Repeated dose toxicity (90 days) by inhalation (Rat) for males and females No observed effect level (NOEL) : 0.2 mg/m3. Repeated dose toxicity (90 days) on ingestion (Rat) for males and females : Toxicity effects on the digestive system. No observed effect level (NOEL) : 1 mg/kg/day (Published data).
Specific effects	:	
- Carcinogenicity	:	Oral toxicity tests on rats and mice did not reveal any carcinogenic potential. (Unpublished reports)
- Mutagenicity	:	Ames test. Negative. (with or without metabolic activation). ( <i>S. typhimurium</i> ) Chromosomal aberrations : Mammalian cells (CHO) In vitro (with or without metabolic activation). Positive. Mouse lymphoma test/TK. In vitro (with or without metabolic activation). Positive. In vitro UDS test(Rat) Negative. In vivo micronucleus test. (Mouse) Negative.
		Product is not considered to be genotoxic
- Reproductive toxicity	:	Fertility study (2 generations)(Rat) no impairment of fertility has been observed on ingestion (Unpublished reports)
		Developmental toxicity study: on ingestion (Rat) NOEL, maternal toxicity : 3 mg/kg/day NOEL, foetal toxicity : >6 mg/kg/day
		Developmental toxicity study: on ingestion (Rabbit) NOEL, maternal toxicity : 3.5 mg/kg/day NOEL, foetal toxicity : >5 mg/kg/day

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## 12 Ecological information

### MOBILITY

- Adsorption/desorption : Product readily filters into the soil.
- Expected behaviour of the product : Ultimate destination of the product : WATER.

### DEGRADABILITY

#### Abiotic degradation

- Hydrolysis : Hydrolyses on contact with water.  
Half life :  
6.18 d at pH 7 and 25 °C  
2.2 h at pH 9 and 25 °C

### BIODEGRADABILITY

- Ultimate aerobic biodegradability : Simulation study :  
79 biodegradation after 30 days. (US EPA FIFRA, Subdivision N, § 162-4)  
Readily biodegradable.
- Anaerobic biodegradation. : Simulation study :  
60 % biodegradation after 28 days. (US EPA FIFRA, Subdivision N, § 162-3)

### BIOACCUMULATION

- Octanol/water partition coefficient : Refer to § 9 for actual figures.  
Not potentially bioaccumulable.

### ECOTOXICITY

- Effects on the aquatic environment : LC 50 (Fish: *Lepomis macrochirus*) / 96h: 0.21 mg/l.  
EC 50 (Daphnia: *Daphnia magna*)/48 h: 0.07 mg/l.  
EC 50 (Fresh water algae: *Selenastrum capricornutum*) / 72 h :  
0.0115 mg/l.  
EC 50 (Bacteria : Activated sludge) / 3 hr(s) : 4.3 mg/l  
  
Very toxic to aquatic organisms tested.

## 13 Disposal considerations

### WASTE FROM RESIDUES

- Prohibition : Do NOT discharge waste into drains.
- Destruction/Disposal : Dispose of in accordance with relevant local regulations. Dispose of this product as hazardous waste. Incinerate at a licensed installation.

### CONTAMINATED PACKAGING

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Decontamination/cleaning	:	Take preliminary precautions based on the dangerous properties of the product. Non-returnable containers: Thoroughly empty the packaging prior to incineration.
Destruction/Disposal	:	Dispose of as hazardous waste. Incinerate at a licensed installation.
NOTE	:	The user's attention is drawn to the possible existence of local regulations regarding disposal.

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## 14 Transport information

### INTERNATIONAL REGULATIONS

#### Land

- Rail/road (RID/ADR) : Class:8.  
Subsidiary risk: 6.1  
Packing group: II.  
Hazard identification number: 86.  
UN number: 2923.  
Labelling: 8 (6.1).

Sea (IMO/IMDG) : Class: 8.  
Subsidiary risk: 6.1  
Packing group: II.  
UN Number: 2923.  
Labelling: 8 (6.1).  
Marine pollutant: YES.  
Emergency schedule (EmS): 8 - 15.  
Description: CORROSIVE SOLID, TOXIC, N.O.S. (Methylene bis thiocyanate).

Air (ICAO-IATA) : Class: 8.  
Subsidiary risk: 6.1.  
Packing group: II.  
UN number: 2923.  
Labelling: 8 (6.1).  
Description: CORROSIVE SOLID, TOXIC, N.O.S (Methylene bis thiocyanate).  
Passenger aircraft: Packing instruction: 814 Quantity : 15kg.  
Cargo aircraft : Packing instruction: 816 Quantity : 50kg.

### OTHER REGULATIONS

- United Kingdom: Rail/road : Substance identification number: 2923.  
Classification for conveyance: 8.  
Subsidiary risk: 6.1  
Packing group: II.  
Emergency action code: 2X.

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## 15 Regulatory information

### LABELLING

EC regulations : Mandatory labelling (prescribed) of hazardous substances: applicable.

- Identification of the hazardous product : EC N°: Appears on the EEC hazardous substances list (Annex 1 of the modified EC directive 67/548/EEC): . EC No. : 228-652-3.

Name of the product: TOLCIDE® MBT.

- Classifications/Symbols : - VERY TOXIC ( T+ )  
- DANGEROUS FOR THE ENVIRONMENT ( N ).

- R phrases : R 26: Very toxic by inhalation.  
R 25: Toxic if swallowed.  
R 34: Causes burns.  
R 43: May cause sensitization by skin contact.  
R 50: Very toxic to aquatic organisms.

- S phrases : S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S 28: After contact with skin, wash immediately with plenty of soap and water.  
S 36/37/39: Wear suitable protective clothing, gloves and eye/face protection.  
S 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
S 61: Avoid release to the environment. Refer to special instructions/Safety data sheet.

### >>>Further regulations

United Kingdom : Handle in accordance with relevant British legislation:  
Chemical Hazard Information and Packaging for Supply Regulations  
Control of Substances Hazardous to Health Regulations  
Environmental Protection Act  
Collection and Disposal of Waste Regulations  
Carriage of Dangerous Goods by Road Regulations  
Carriage of Dangerous Goods by Rail Regulations  
Carriage of Dangerous Goods by Road and Rail (Classification, Packaging and Labelling) and use of Transport Pressure Receptacles Regulations

### NOTE

: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the Safety Data Sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

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## 16 Other information

Further product information

All data quoted in this SDS is owned by Rhodia unless otherwise indicated

Registration numbers

: EINECS N°: 228-652-3

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This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfil his obligations regarding the use of hazardous products. This information is not exhaustive. This does not exonerate the user from ensuring that legal obligations, other than those mentioned, relating to the use and storage of the product, do not exist. This is solely his responsibility.