

MATERIAL SAFETY DATA SHEET

According to EC-directive 93/112/EC

TRICONI MBTS(DM)

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product label name 2,2'-Dithiobis(benzothiazole)
Supplier Trigonal Concourse Inc.
4F, Golden Plaza,
20 Hongkong Middle Road, Qingdao 266071,
China
Tel/Fax:+86 532 85760953
Email:info@triconi.com
Http://www.triconi.com

2.COMPOSITION/ INFORMATION ON INGREDIENTS

This product is to be considered as a substance in conformance to EC directives.

Information on hazardous ingredients

Chemical description 2,2'-Dithiobis(benzothiazole)

Composition / information on ingredients

Number	% w/w	CAS-number	Chemical name
1	>96	120-78-5	Dibenzothiazyl disulfide
2	1.0-2.0	8042-47-5	White mineral oil (petroleum)

Number	EC-number	Annex-1 number	Symbol(s)	Risk-phrase(s)
1	204-424-9	613-135-00-0	XiN R31	R43 R50/53
2	232-455-8		none	none

Other information Formula: C14H8N2S4.

3. HAZARDS IDENTIFICATION

Contact with acids liberates toxic gas.

May cause sensitization by skin contact.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST AID MEASURES

Symptoms and effects May cause sensitization by skin contact. Dust may be irritating to the respiratory tract and cause symptoms of bronchitis.

First aid

General

In all cases of doubt, or when symptoms persist, seek medical attention.

Inhalation

Move to fresh air. If symptoms persist, seek medical advice.

Skin

Wash immediately with soap and water. Remove contaminated clothing. Launder clothes before reuse.

Eye

Rinse thoroughly with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical advice if irritation develops.

Ingestion

Rinse mouth, give water to drink.

Advice to physician

No specific recommendations.

5. FIRE-FIGHTING MEASURES

Extinguishing media waterspray, water mist, foam, dry chemical powder,CO2

Unsuitable extinguishing media waterjet.

Special exposure hazards Emits toxic fumes under fire conditions.

Hazardous decomposition/ combustion products carbon monoxide (CO), Sulfur oxides (SOx), nitrous gases (NOx).

Protective equipment Wear self contained breathing apparatus.

Other information Do not allow run-off from fire fighting to enter drains or water courses.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions For personal protection see Section 8. Avoid dust generation.

Environmental precautions Avoid discharge into the environment.

Methods for cleaning up Collect as much as possible in a clean container for (preferable) reuse or disposal.

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7. HANDLING AND STORAGE

Handling	Avoid contact with skin. Avoid dust generation.
Fire and explosion prevention	Avoid dust accumulation. Dust/air mixtures may ignite violently upon exposure to sparks or sources of ignition. Kst: 195 - 283 bar.m/s. Maximum corrected explosion pressure: 8.1 - 8.6 bar.
Storage requirements	Store in a dry and cool place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls	Avoid dust generation. Ensure good ventilation and local exhaustion of the working area.
Exposure limits	
Name	
Dibenzothiazyl disulfide	OES-TWA 5.0 mg/m ³ (Respirable dust)
Personal protection	
Respiratory	Do not breathe dust. In case of dust formation use dust mask.
Hand	Wear protective gloves.
Eye	Wear safety goggles.
Skin and body	Wear suitable protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Dust suppressed powder
Colour	Light-yellow
Odour	aromatic
Boiling point/range	260 °C (101 kPa), Decomposes
Melting point/range	165 °C Min
Flash point	not determined (> 250 °C)
Flammability	solid, not (in)flammable
Autoignition temperature	440 - 460 °C
Explosive properties	dust explosion hazard
Explosion limits	Lower Explosion Limit (LEL): 30 - 40 g/m ³ . Minimum ignition energy (MIE): =< 3 - 7 mJ
Oxidizing properties	not applicable
Vapour pressure	Negligible at room temperatures
Density	1540 kg/m ³ (20 °C)
Bulk density	320-360 kg/m ³
Solubility in water	0.088 kg/m ³ (pH 5) 0.049 kg/m ³ (pH 9)
Solubility in other solvents	CS ₂ , benzene
pH value	neutral character
Partition coefficient	4.5
n-octanol/water	
Relative vapour density (air=1)	not applicable
Viscosity	not applicable

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage and handling conditions (see section 7).
Conditions to avoid	Heating > 100 °C: May catch fire.
Materials to avoid	strong oxidising agents, acids
Hazardous decomposition products	Thermal decomposition products: carbon monoxide (CO), nitrous gases (NO _x), Sulfur oxides (SO _x). Contact with acids liberates toxic gas.

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11. TOXICOLOGICAL INFORMATION

Name	2,2'-Dithiobis(benzothiazole)
Acute toxicity	
Oral LD50	rat: >7940 mg/kg.
Dermal LD50	rabbit: >7940 mg/kg.
Irritation	
Skin	Overall mean EU skin irritation scores: Redness: 0.0. Swelling: 0.0. Non-irritating.
Eye	Overall mean EU eye irritation scores: Conjunctival redness: 0.2. Conjunctival swelling: 0.1. Iris lesions: 0.0 Cornea opacity: 0.0 Slightly irritating to eyes but not sufficient for classification.
Sensitization	Maximisation test (guinea pig): Sensitizing (skin).
Genotoxicity	Not mutagenic (in vitro)
Other toxicological information	Not teratogenic Not embryotoxic (rat).
	Human experience: Patch testing: Not sensitizing, Non-irritating. Prolonged or repeated skin contact: May cause sensitization in susceptible individuals.

12. ECOLOGICAL INFORMATION

Name	2,2'-Dithiobis(benzothiazole)
Ecotoxicity fish	96h-LC50 (Lepomis macrochirus): 82 mg/l. 96h-LC50 (Oncorhynchus mykiss): 66 mg/l. 96h-LC50 (Pimephales promelas): > 1000 mg/l.
daphnia	48h-EC50 (Daphnia magna): 82 mg/l.
algae	96 h-EC50 (Selenastrum capricornutum; Cell count): 0.7 mg/l.
Fate	
Degradation Biotic	Not readily biodegradable

13. DISPOSAL CONSIDERATIONS

Product	Avoid discharge into the environment. Small quantities: According to local regulations. Large quantities: Consult QRC for special advice.
Contaminated packaging	According to local regulations.
Other information	Waste code number: Please refer to your specific industry in the European Waste Catalogue.

14. TRANSPORT INFORMATION

Land transport (ADR/ RID)

ADR class	9	ADR item number	12 c)
RID class	9	RID item number	12 c)
Hazard Identification No.	90	Substance Identification No.	3077
TREM-Card	3077912c01	UN number	3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s. (2,2'-dithiobis(benzothiazole) Environmentally hazardous substance, solid, n.o.s. (2,2'-Dithiobis(benzothiazole)		

Sea transport (IMDG-code/ IMO)

IMO/IMDG code	not restricted	Class	not restricted
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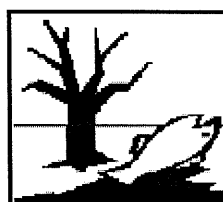
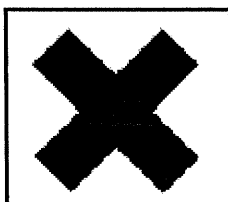
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Packing group	not relevant	UN number	none
EMS	not relevant	MFAG	no
Marine pollutant	no		
Proper shipping name	not relevant		
<i>Air transport (ICAO-TI/ IATA-DGR)</i>			
ICAO-TI/IATA-DGR UN number	none		
Class	not restricted	Packing group	not relevant
Proper shipping name	not relevant		

15. REGULATORY INFORMATION

Chemical description	2,2'-Dithiobis(benzothiazole)
Labelling according to EC directives	
EC-number	See section 2
Classification based on	Annex-1 to directive 67/548/EEC



Symbol(s)	IRRITANT (Xi)	DANGEROUS FOR THE ENVIRONMENT (N)
R(isk) phrase(s)	R 31 Contact with acids liberates toxic gas R 43 May cause sensitization by skin contact R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment	
S(afety) phrase(s)	S 36/37 Wear suitable protective clothing and gloves S 60 This material and its container must be disposed of as hazardous waste S 61 Avoid release to the environment. Refer to special instructions/Safety data sheets	
Other information	To be displayed on the label: "EC label".	
Wassergefährdungsklasse (WGK)	2 (VwVwS Anhang 2 Nr. 1322)	

16. OTHER INFORMATION

This information only concerns the above-mentioned product and does not need to be valid if used with other product(s) or in any process. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.