



# SAFETY DATA SHEET

Revision Date 09-May-2012

Revision Number 2

## SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### Product Identifier

#### Product Description:

Tetramethylthiuram disulfide

#### Cat No.

138480000; 138480010; 138480050; 138485000

#### Synonyms

Thiram; TMTD; Bis(dimethylthiocarbamyl) disulfide

### Relevant identified uses of the substance or mixture and uses advised against

#### Recommended Use

Laboratory chemicals

#### Uses advised against

No Information available

### Details of the supplier of the safety data sheet

#### Company

Acros Organics BVBA  
Janssen Pharmaceuticaaan 3a  
2440 Geel, Belgium

#### E-mail address

begel.sdsdesk@thermofisher.com

### Emergency Telephone Number

For information in the US, call: 001-800-ACROS-01

For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99

Emergency Number, US: 001-201-796-7100

CHEMTREC Phone Number, US: 001-800-424-9300

CHEMTREC Phone Number, Europe: 001-703-527-3887

## SECTION 2. HAZARDS IDENTIFICATION

### Classification of the substance or mixture

#### REGULATION (EC) No 1272/2008

Acute oral toxicity	Category 4
Acute Inhalation Toxicity - Dusts and Mists	Category 4
Skin Corrosion/irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Skin Sensitization	Category 1
Specific target organ toxicity - (repeated exposure)	Category 2
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

### Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

#### Symbol(s)

Xn - Harmful

N - Dangerous for the environment

#### R-phrases(s)

R43 - May cause sensitization by skin contact

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## SECTION 2. HAZARDS IDENTIFICATION

### Risk Combination Phrases

R20/22 - Harmful by inhalation and if swallowed  
 R36/38 - Irritating to eyes and skin  
 R48/22 - Harmful: danger of serious damage to health by prolonged exposure if swallowed  
 R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

### Label Elements



### Signal Word

### Warning

### Hazard Statements

H317 - May cause an allergic skin reaction  
 H332 - Harmful if inhaled  
 H373 - May cause damage to organs through prolonged or repeated exposure  
 H315 - Causes skin irritation  
 H410 - Very toxic to aquatic life with long lasting effects  
 H319 - Causes serious eye irritation  
 H302 - Harmful if swallowed

### Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear eye protection/ face protection  
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray  
 P273 - Avoid release to the environment  
 P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing  
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
 P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

### Other Hazards

No information available.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC-No.	Weight %	CAS-No	67/548/EEC Classification	CLP Classification - Regulation (EC) No 1272/2008	REACH No.



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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Thiram 137-26-8	EEC No. 205-286-2	97	137-26-8	Xn; R20/22-48/22 Xi; R36/38 R43 N; R50-53	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-
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For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

## SECTION 4. FIRST AID MEASURES

### Description of first aid measures

#### Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

#### Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Obtain medical attention.

#### Ingestion

Clean mouth with water. Get medical attention.

#### Inhalation

Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Obtain medical attention.

#### Notes to Physician

Treat symptomatically

## SECTION 5. FIRE-FIGHTING MEASURES

### Extinguishing media

#### Suitable Extinguishing Media

Water spray. Carbon dioxide (CO<sub>2</sub>). Dry chemical. chemical foam.

#### Extinguishing media which must not be used for safety reasons

No information available.

### Special hazards arising from the substance or mixture

Fine dust dispersed in air may ignite.

### Advice for fire-fighters



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As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation

### Environmental precautions

Prevent further leakage or spillage if safe to do so

### Methods and material for containment and cleaning up

Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Do not let this chemical enter the environment.

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Avoid contact with skin and eyes. Do not breathe dust. Do not breathe vapors or spray mist. Do not ingest.

### Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep container tightly closed.

### Specific End Uses

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### **Exposure limits**

#### **Component**

Thiram

European Union	The United Kingdom	France	Belgium	Spain
		VME: 5 mg/m <sup>3</sup> 8 heures.	TWA: 0.05 mg/m <sup>3</sup> 8 uren TWA: 0.005 ppm 8 uren	VLA-ED: 1 mg/m <sup>3</sup> 8 horas

#### **Component**

Thiram

Italy	Germany	Portugal	The Netherlands	Finland
	MAK: 1 mg/m <sup>3</sup> 8 Stunden. inhalable fraction Peak: 2 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup> 8 Stunden. inhalable fraction exposure factor 2	TWA: 1 mg/m <sup>3</sup> 8 horas		TWA: 5 mg/m <sup>3</sup> 8 tunteina STEL: 10 mg/m <sup>3</sup> 15 minuutteina

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<b>Component</b> Thiram	Austria	Denmark	Switzerland	Poland	Norway
	STEL: 25 mg/m <sup>3</sup> 15 Minuten TWA: 5 mg/m <sup>3</sup> 8 Stunden	TWA: 1 mg/m <sup>3</sup> 8 timer	STEL: 2 mg/m <sup>3</sup> 15 Minuten MAK: 1 mg/m <sup>3</sup> 8 Stunden	TWA: 0.5 mg/m <sup>3</sup> 8 godzinach	TWA: 5 mg/m <sup>3</sup> 8 timer STEL: 10 mg/m <sup>3</sup> 15 minutter.
<b>Component</b> Thiram	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
	TWA: 4.0 mg/m <sup>3</sup>		TWA: 5 mg/m <sup>3</sup> 8 hr. STEL: 10 mg/m <sup>3</sup> 15 min		
<b>Component</b> Thiram	Estonia	Gibraltar	Greece	Hungary	Iceland
	TWA: 1 mg/m <sup>3</sup> 8 tundides. STEL: 2 mg/m <sup>3</sup> 15 minutites.		STEL: 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>		TWA: 1 mg/m <sup>3</sup> 8 klukkustundum. Ceiling: 2 mg/m <sup>3</sup>
<b>Component</b> Thiram	Latvia	Lithuania	Luxembourg	Malta	Romania
		TWA: 1 mg/m <sup>3</sup> STEL: 2 mg/m <sup>3</sup>			TWA: 2 mg/m <sup>3</sup> 8 ore STEL: 5 mg/m <sup>3</sup> 15 minute
<b>Component</b> Thiram	Russia - TWA	Slovak Republic	Slovenia	Sweden	Turkey
	TWA: 0.5 mg/m <sup>3</sup> Skin notation STEL: 1.5 mg/m <sup>3</sup> aerosol		TWA: 5 mg/m <sup>3</sup> 8 urah inhalable fraction STEL: 20 mg/m <sup>3</sup> 15 minutah inhalable fraction	STV: 2 mg/m <sup>3</sup> 15 minuter LLV: 1 mg/m <sup>3</sup> 8 timmar.	

### Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

### Derived No Effect Level (DNEL)

No information available.

### Predicted No Effect Concentration (PNEC)

No information available.

### Exposure controls

#### Engineering Measures

Ensure adequate ventilation, especially in confined areas Ensure that eyewash stations and safety showers are close to the workstation location

#### Personal protective equipment

##### Eye Protection

Goggles

##### Hand Protection

Protective gloves

##### Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

##### Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

### Environmental exposure controls

No information available.



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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Powder, Solid
Appearance	White
odor	strong
pH	No information available.
Vapor Pressure	negligible
Boiling Point/Range	129°C / 264.2°F @ 20 mmHg
Melting Point/Range	>145°C / 293°F
Flash Point	No information available.
Autoignition Temperature	No information available.
Water Solubility	16.5 mg/L (20°C)
Specific Gravity	1.29 @ 20°C
Molecular Formula	C6 H12 N2 S4
Molecular Weight	240.41

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

### Chemical Stability

Stable under normal conditions.

### Possibility of Hazardous Reactions

Hazardous Polymerization	No information available.
Hazardous Reactions .	No information available.

### Conditions to Avoid

Incompatible products.

### Incompatible Materials

Acids, Strong oxidizing agents, Reducing agents.

### Hazardous Decomposition Products

Nitrogen oxides (NOx). Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Sulfur oxides.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects

### Acute Toxicity

Product Information	No acute toxicity information is available for this product
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## SECTION 11. TOXICOLOGICAL INFORMATION

### Component Information

**Component**  
Thiram

LD50 Oral	LD50 Dermal	LC50 Inhalation
560 mg/kg ( Rat )	2000 mg/kg ( Rat )	500 mg/m <sup>3</sup> ( Rat ) 4 h

### Chronic Toxicity

#### Carcinogenicity

There are no known carcinogenic chemicals in this product

#### Sensitization

May cause sensitization by skin contact

#### Mutagenic Effects

Ames test: positive.

#### Reproductive Effects

No information available.

#### Developmental Effects

No information available.

#### Target Organs

No information available.

#### Other Adverse Effects

See actual entry in RTECS for complete information

#### Endocrine Disruptor Information

### Component

EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Group I Chemical	High Exposure Concern	

Thiram

## SECTION 12. ECOLOGICAL INFORMATION

### Toxicity

#### Ecotoxicity effects

Do not empty into drains

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Thiram	0.1 mg/L EC50 < 96 h	0.13 mg/L LC50 96 h 0.27 mg/L LC50 96 h 0.00024-0.00028 mg/L LC50 96 h 0.034-0.05005 mg/L LC50 96 h 0.0491-0.0611 nM LC50 96 h 0.090-0.170 mg/L LC50 96 h 0.22-0.33 mg/L LC50 96 h 0.048 mg/L LC50 96 h 0.0003 mg/L LC50 96 h 1.2 mg/L LC50 96 h		0.21 mg/L EC50 = 48 h

### Persistence and degradability



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No information available

## **Bioaccumulative potential**

No information available.

<b>Component</b>	<b>log Pow</b>
Thiram	1.73

## **Mobility in soil**

## **Results of PBT and vPvB assessment**

## **Other adverse effects**

No information available

## **SECTION 13. DISPOSAL CONSIDERATIONS**

## **Waste treatment methods**

**Waste from Residues / Unused Products** Dispose of in accordance with local regulations

**Contaminated Packaging** Empty containers should be taken to local recyclers for disposal

## **SECTION 14. TRANSPORT INFORMATION**

## **IMDG/IMO**

<b>UN-No</b>	2811
<b>Hazard Class</b>	6.1
<b>Packing Group</b>	II
<b>Proper Shipping Name</b>	TOXIC SOLID, ORGANIC, N.O.S.

## **ADR**

<b>UN-No</b>	2811
<b>Hazard Class</b>	6.1
<b>Packing Group</b>	II
<b>Proper Shipping Name</b>	TOXIC SOLID, ORGANIC, N.O.S.

## **IATA**

<b>UN-No</b>	2811
<b>Hazard Class</b>	6.1
<b>Packing Group</b>	II
<b>Proper Shipping Name</b>	TOXIC SOLID, ORGANIC, N.O.S.*





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## SECTION 14. TRANSPORT INFORMATION

## SECTION 15. REGULATORY INFORMATION

### Safety, health and environmental regulations/legislation specific for the substance or mixture

#### International Inventories

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
Thiram	205-286-2	-		X	X	-	X	X	X	X	X

#### Legend

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**CHINA** - China Inventory of Existing Chemical Substances

**AICS** - Inventory of Chemical Substances

**KECL** - Existing and Evaluated Chemical Substances

#### Chemical Safety Assessment

## SECTION 16. OTHER INFORMATION

#### Full text of R-phrases referred to under sections 2 and 3

R43 - May cause sensitization by skin contact

R20/22 - Harmful by inhalation and if swallowed

R36/38 - Irritating to eyes and skin

R48/22 - Harmful: danger of serious damage to health by prolonged exposure if swallowed

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

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Revision Summary

Reason for revision Not applicable

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006



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## SECTION 16. OTHER INFORMATION

### Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet