

## MATERIAL SAFETY DATA SHEET

: According to EC-directive 2001/58/EC

Rubber Accelerator TMTM(TS)

HS Code:29309090.90

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<b>Product label name</b>	Tetramethyl Thiuram Monosulfide
<b>Supplier</b>	Qingdao YLSCH Industry&Trade Co.,Ltd Room 501,2-3 Unit. No.8,Zhengzhou Road, Qingdao,China. TEL: +86 18661665800
<b>Emergency telephone</b>	TEL: +86 18661665800
<b>Intended use</b>	Rubber Vulcanization Accelerator

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

<b>Chemical name</b>	一硫化四甲基秋兰姆 Tetramethyl Thiuram Monosulfide
<b>CAS NO.</b>	97-74-5
<b>Chemical description</b>	Yellow granule
<b>TSCA NO.</b>	none
<b>EINECS NO.</b>	none
<b>Other information</b>	$C_6H_{12}N_2S_3$

### 3. HAZARDS IDENTIFICATION

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

### 4. FIRST AID MEASURES

<b>Symptoms and effects</b>	Dust may be irritating to the respiratory tract and cause symptoms of bronchitis. Repeated contact may cause skin sensitization.
<b>First aid</b>	
<b>General</b>	In all cases of doubt, or when symptoms persist, seek medical attention.

<b>Inhalation</b>	Move to fresh air. If symptoms persist, seek medical advice.
<b>Skin</b>	Remove all contaminated clothing immediately. Wash off with plenty of soap and water. Seek medical advice if irritation develops. Launder clothes before reuse.
<b>Eye</b>	Rinse thoroughly with plenty of water. Eyelids should be held away from the eyeball to Ensure thorough rinsing. Seek medical advice if irritation develops.
<b>Ingestion</b>	Rinse mouth, give water to drink.
<b>Advice to physician</b>	No specific recommendations.

## 5. FIRE-FIGHTING MEASURES

<b>Extinguishing media</b>	Waterspray, water mist, foam, dry chemical powder, CO <sub>2</sub>
<b>Unsuitable extinguishing media</b>	Waterjet
<b>Special exposure hazards</b>	None known
<b>Hazardous decomposition/ combustion products</b>	Carbon monoxide(CO), sulfur oxides (SO <sub>x</sub> ), nitrous gases (NO <sub>x</sub> ).
<b>Protective equipment</b>	Wear self contained breathing apparatus.
<b>Other information</b>	Do not allow run-off from fire fighting to enter drains or water courses.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	For personal protection see Section 8. Avoid dust generation.
<b>Environmental precautions</b>	Avoid discharge into the environment. Collect as much as possible in a clean container for
<b>Methods for cleaning up</b>	(preferable) reuse or disposal.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Avoid contact with skin. Avoid dust generation. The usual precautions for handling chemicals should be observed. Dust generated during handling. Storage can form explosive mixtures in air.
<b>Storage requirements</b>	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:**Tetramethyl Thiuram Monosulfide No exposure limit has been established.

**Personal protection**

**Respiratory** In this country no exposure limit has been established

**Hand** Wear suitable gloves.

**Eye** Wear safety goggles.

**Skin and body** Wear suitable protective clothing.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Yellow granule	<b>Colour</b>	Yellow
<b>Odour</b>	----	<b>Boiling point</b>	----
<b>Melting point</b> ≥	104℃	<b>Flash point</b>	> 150℃
<b>Flammability</b>	----	<b>Explosion limits</b>	----
<b>Explosive properties</b>		<b>Auto ignition temperature</b>	> 200℃
<b>Oxidizing properties</b>	----	<b>Vapour pressure</b>	----
<b>Density</b>	1.37-1.40g/cm <sup>3</sup> (25℃)	<b>Bulk density</b>	----
<b>Solubility in water</b>	Insoluble in water	<b>Solubility in other solvents</b>	Toluene, chloroform, CS <sub>2</sub> , benzene
<b>pH value</b>	----	<b>Partition coefficient</b>	----
<b>Residues (150um)% Max</b>	0.1(Max)	<b>Relative vapour density</b>	----
<b>Viscosity</b>	----	<b>Assay content %</b> ≥	95
<b>Strength of grain(N)</b>	0.6-2.5	<b>Zinc content %</b>	----
<b>Soluble Zinc content</b> ≤	----	<b>Oil content %</b>	----

**10. STABILITY AND REACTIVITY**

<b>Stability</b>	Stable under recommended storage and handling conditions (see section 7).
<b>Conditions to avoid</b>	Heating > 100 °C: May catch fire.
<b>Materials to avoid</b>	Oxidizing agents. Strong acid. Nitrosating agents may form carcinogenic N-nitrosamines.
<b>Hazardous decomposition products</b>	Thermal decomposition products: carbon monoxide (CO), nitrous gases (NO <sub>x</sub> ), Sulfur oxides (SO <sub>x</sub> ).

**11. TOXICOLOGICAL INFORMATION**



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<b>Name</b>	Tetramethyl Thiuram Monosulfide
<b>Acute toxicity</b>	
<b>Oral LD50</b>	rat : 730-1390mg/kg
<b>Dermal LD50</b>	rabbit : >2000 mg/kg
<b>Irritation</b>	
<b>Skin</b>	Slightly irritating to skin but not sufficient for classification.
<b>Eye</b>	Slightly irritating to eyes but not sufficient for classification.

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## 12. ECOLOGICAL INFORMATION

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<b>Name</b>	Tetramethyl Thiuram Monosulfide
<b>Ecotoxicity</b>	
<b>Fish</b>	96h-LC50 (Oncorhynchus mykiss): 2.3mg/l. 96h-LC50 (Lepomis macrochirus): 2.6 mg/l.
<b>Daphnia</b>	48h-EC50 (Daphnia magna): 1.6 mg/l.
<b>Degradation Biotic</b>	Not readily biodegradable.

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## 13. DISPOSAL CONSIDERATIONS

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

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## 14. TRANSPORT INFORMATION

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### Land transport (ADR/ RID)

<b>ADR class</b>	9	<b>RID class</b>	9
<b>ADR/RID packing group</b>	----	<b>Hazard Identification No.</b>	90
<b>Substance Identification No.</b>	3077	<b>UN number</b>	3077
<b>Proper Shipping Name</b>	(Tetramethyl Thiuram Monosulfide)		

**Sea transport (IMDG-code/ IMO)****Correct technical name****IMDG Class****UN Number****Packaging group****EMS Number****Air transport (ICAO-TI/ IATA-DGR)****ICAO-TI/IATA-DGR Class**

9

**UN number**

3077

**Packing group**

Environmentally hazardous substance, solid, n.o.s.

**Correct technical name**

(Tetramethyl Thiuram Monosulfide)

**15. REGULATORY INFORMATION****Chemical description**

Tetramethyl Thiuram Monosulfide

**Labelling according to EC directives****EC-number**

See section 2

**Classification based on**

Annex-1 to directive 67/548/EEC

R43 May cause sensitization by skin contact

**R(isk) phrase(s)**

R 50/53 Very toxic to aquatic organisms, May cause long-term adverse effects in the aquatic environment.

S 24 Avoid contact with skin

S 37 Wear suitable gloves

S 60 This material and its container must be disposed of as hazardous waste

**S(afety) phrase(s)**

S 61 Avoid release to the environment. Refer to special instruction /Safety data sheets

**Other information**

To be displayed on the label: "EC label".

**Wassergefährdungsklasse (WGK)**

2 (VwVwS Anhang 3)

**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.