

<b>1. Identification of Substance and Company</b>	
Product Name	: SIN RUBTECH® POLYMER BOUND PREDISPERSED TMTD – 70G
Trade Name	: TMTD – 70G
Manufacturer	: UA Rubber Speciality Chemical Sdn. Bhd.
Supplier	: Sin Rubtech Consultancy Sdn. Bhd.
Address	: 10-12 Jalan Industri Cherok To’Kun 2, Taman Industri Cherok To’Kun, 14000 Bukit Mertajam, Seberang Prai Utara, Penang, Malaysia.
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<b>2. Composition / Information on ingredients</b>	
A proprietary predispersed 70% tetramethylthiuram disulphide in a 30% elastomeric/ processing aids binder.	
CAS No	TMTD : 137 – 26 – 8
	Hazard Symbol : Xn
Binder	: Trade Secret
	R phrases : 22, 36/37, 40 & 43

  

<b>3. Hazards Identification</b>	
Hazard Designation	: Harmful
Health Hazards	: Harmful
Inhalation	: Not applicable at ambient temperatures.
Skin Contact	: Avoid direct contact. Can cause irritation.
Eye Contact	: Can cause irritation
Ingestion	: Unlikely to be harmful unless excessively taken.

  

<b>4. First-aid Measures</b>	
Inhalation	: After inhalation of vapours during processing remove to fresh air.
Skin Contact	: Wash with plenty of water and soap.
Eye Contact	: Wash with plenty of water and obtain medical attention if any sensation persists.
Ingestion	: Remove material from mouth. Wash with water. If large amounts swallowed or symptoms develop seek medical attention.

  

<b>5. Fire-fighting Measures</b>	
Extinguishing Media	: Water spray, foam, carbon dioxide, dry chemicals.
Special Protective Equipment	: Protective clothing and self-contained breathing equipment should be available for firemen.

<b>6. Accidental Release Measures</b>	
Methods for Cleaning / Collecting	: Sweep up and transfer product to a suitably labelled container and dispose at an approval site.

<b>7. Handling and Storage</b>	
Handling	: No special precautions necessary but normal industrial good housekeeping practices should be followed as for any rubber additive.

<b>8. Exposure Controls / Personal Protection</b>	
General Precautions	: Good industrial hygiene should be followed.
Ventilation	: Adequate ventilation should be maintained when handling heated product.
Occupational Exposure Limits	: See item 15.
Personal Protective Equipment	: Normal precautions should be observed as for handling all chemicals.

<b>9. Physical and Chemical Properties</b>	
Form/Colour/Odour	: Granules / Off - White / Faint
pH	: Not Applicable.
Boiling Point	: Not Applicable.
Solidif./Melting Point	: Not Applicable.
Flash Point	: Not Applicable.
Auto-ignition Temp.	: > 200oC
Explosive/oxidizing properties	: Not to be expected.
Vapor pressure (mbar/208C)	: Not Applicable.
Density (g/cm <sup>3</sup> )	: 1.15 Approx.
Solubility in Organic Solvents	: Partially soluble in organic solvents.
Solubility in Water	: Insoluble.

<b>10. Stability and Reactivity</b>	
Stability	: Stable under normal conditions.
Conditions to Avoid	: After prolonged heating, decomposition starts at about 1508C
Materials to Avoid	: Strong oxidising agents.
Hazardous Decomposition Products	: Tetramethyl thiourea, carbon disulphide.
Hazardous Reactions	: Contact with nitrosating agents may lead to nitrosoamine formulation.

**11. Toxicological Information**

The following applies to tetramethylthiuram disulphide (TMTD) :

LD 50 oral, rat : 780-1300 mg/kg.  
Effect on the eyes : slight irritation (rabbit)  
Effect on the skin : slight irritation (rabbit)  
Mutagenicity : mutagen substance of category 3

Special properties/effects :  
May cause skin sensitization with man.  
Nausea may occur in workers who consume alcohol after exposure to the product.  
(Antabuse Syndrome)

**12. Ecological Information**

Water pollution class (WGK) : 2 - impairment of water quality (own classification).  
WGK - Classification in accordance with the German Water Resources Act Prevent entry into drains, clear water drainage, waters or soil.

**13. Disposal Consideration**

Waste Disposal Method : Incinerate according to local regulations

Contaminated Container Disposal : Observe local regulations. Treat container and waste material as hazardous.

**14. Transport Information**

Not classified in RID/ADR - ADNR - IMDG - ICAO/IATA - DGR.

**15. Regulatory Information**

Labelling in accordance with Annex T of directive 57/548/EEC and its amendments and adaptations:

<u>Symbol</u>	<u>Hazard Description</u>
Xn	: Harmful
Contains	: tetramethylthiuram disulphide (TMTD)
<u>Risk phrase(s)</u>	<u>Definition</u>
R 22	: Harmful if swallowed.
R 36/37	: Irritating to eyes and respiratory system.
R 40	: Possible risks of irreversible effects.
R 43	: May cause sensitization by skin contact.
<u>Safety phrase(s)</u>	<u>Definition</u>
S 36/37	: Wear suitable protective clothing and gloves.

Under vulcanization conditions TMTD may form traces of N-nitrosodimethyl-amine. Must not be used together with nitrosating agents.  
Note German Technical Regulation on dangerous Substances No. S52 (nitrosamine).

<b>16. Other Information (training needs, possible restrictions, data sources, etc)</b>	
Data Sources	: Sin Rubtech Consultancy Sdn. Bhd.
Department issuing MSDS	: Technical Department.
Contact	: Sin Yoong Leong. Technical Manager

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