

WILLING CHEM Document No: PWCC-MSDS-008

MSDS for Tetraethylthiuram disulfide

****** SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ******

Product Name: Accelerator TETD
Chemical Name: Tetraethylthiuram disulfide
Synonyms: WILLING TETD,TETD
Company Identification: Puyang Willing Chemicals Co. LTD.
Industry and Commercial Model Zone
Puyang City, Henan, China
457063

For other information call:

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****** SECTION 2 – COMPOSITION, INFORMATION ON INGREDIENTS ******

CAS#	Chemical Name	%	EINECS#
97-77-8	Tetraethylthiuram disulfide	>98.0	202-607-8

Hazard Symbols: XN

Risk Phrases: R22 R43 R48/22 R50/53

****** SECTION 3 – HAZARDS IDENTIFICATION ******

EMERGENCY OVERVIEW

Harmful if swallowed. Harmful: danger of serious damage to health by prolonged exposure if swallowed. May cause sensitization by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Chronic:

Not available.

****** SECTION 4 – FIRST AID MEASURES ******

Symptoms and effects: Dust may be irritating to the respiratory tract and cause symptoms of bronchitis. May cause alcohol intolerance.

First aid

General: Do not drink alcohol after exposure.

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

Skin: Wash immediately with soap and water.

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.

****** SECTION 5 – FIRE FIGHTING MEASURES ******

Extinguishing media: waterspray, water mist, foam, dry chemical powder.

Unsuitable extinguishing media: water jet.

Special exposure hazards: none known.

Hazardous decomposition/combustion products:

Emits toxic fumes under fire conditions: hydrogen cyanide (HCN), sulphur dioxide (SO₂), nitrous, gases (NO_x).

Protective equipment: Wear self contained breathing apparatus.

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

****** SECTION 6 – ACCIDENTAL RELEASE MEASURES ******

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

Environmental precautions: Do not flush into public water courses.

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

****** SECTION 7 – HANDLING and STORAGE ******

Handling: Do not breathe dust. Avoid contact with skin.

Fire and explosion prevention:

Avoid dust accumulation. Dust/air mixtures may ignite violently upon exposure to sparks or sources of ignition.

Dust explosion class (VDI 2263): St 1.

KSt: 150 bar.m/s.

Maximum rate of pressure rise: 552 bar/s.

Maximum corrected explosion pressure: 6,8 bar.

Storage requirements Store in a dry and cool place.

****** SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION ******

Engineering controls: Avoid dust generation. Ensure good ventilation and local exhaustion of the working area.

Exposure limits

Tetraethylthiuram disulfide OES-TWA 5.0 mg/m³ (Respirable dust)

Personal protection

Respiratory: Avoid breathing dust. In case of insufficient ventilation wear suitable respiratory

equipment.

Hand: Wear protective gloves.

Eye: Wear safety goggles.

Skin and body: Wear suitable protective clothing.

****** SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES ******

Appearance:	Dedusted powder, powder, crystal powder, granules
Colour:	white, light cream
Odour:	slightly amine like
Boiling point/range:	not relevant
Melting point/range:	min. 64 °C
Flash point:	not determined
Flammability:	not determined
Autoignition temperature:	240 - 280 °C
Explosive properties:	dust explosion hazard
Explosion limits:	Lower Explosion Limit (LEL): 20 g/m ³ , Minimum ignition energy: =< 10 mJ, Limiting oxygen concentration (LOC) (V =< 1 m ³): 7,4 Vol % O ₂ .
Oxidizing properties:	not applicable
Vapour pressure:	negligible (20 °C)
Density :	1310 kg/m ³ (20 °C)
Bulk density:	340-380 kg/m ³
Solubility in water:	Insoluble
Solubility in other solvents:	CS ₂ , benzene
pH value :	not determined
Partition coefficient n-octanol/water:	not determined
Relative vapour density (air=1):	not applicable
Viscosity:	not applicable
Molecular Formula:	[(C ₂ H ₅) ₂ NCS ₂] ₂
Molecular Weight:	296.51
Loss on Drying:	0.30% Max.
Ash:	0.30 Max.
Residues on 150 µm sieve:	0.50% Max.

****** SECTION 10 – STABILITY AND REACTIVITY ******

Stability: Stable under recommended storage and handling conditions (see section 7).

Conditions to avoid : No specific recommendations.

Materials to avoid: oxidizing agents, strong acid.

Hazardous decomposition products: No hazardous decomposition products known.

Other information : During the vulcanization process, traces of carcinogenic N-nitrosamines may be formed from decomposition products (amines) in the presence of nitrosating agents.

****** SECTION 11 – TOXICOLOGICAL INFORMATION ******

Name: Tetraethylthiuram disulfide

Acute toxicity

Oral LD50 rat: 1300-3400 mg/kg.

Irritation

Skin: Practically non-irritating.

Eye: Practically non-irritating.

Genotoxicity : Ames test: Not mutagenic.

****** SECTION 12 – ECOLOGICAL INFORMATION ******

Name: Tetraethylthiuram disulfide

Ecotoxicity

fish : 96h-LC50 (Poecilia reticulata): 0.19 - 0.32 mg/l.

96h-LC50 (Poecilia reticulata): 0.32 mg/l (Lit.).

daphnia: 48h-EC50 (Daphnia magna): 0.12 mg/l (Lit.).

algae: 96 h-EC50 (Chlorella pyrenoidosa): 1.8 mg/l (Lit.).

bacteria: 15min EC 50 (Photobacterium phosphoreum): 1.21 mg/l (Lit.).

****** SECTION 13 – DISPOSAL CONSIDERATIONS ******

Product: Avoid discharge into the environment.

Small quantities: According to local regulations.

Large quantities: Consult WILLINGCHEM 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.

****** SECTION 14 – TRANSPORT INFORMATION ******

Land transport (ADR/ RID)

ADR class 9

RID class 9

ADR/RID packing group III

Hazard Identification No. 90

Substance Identification No. 3077

UN number 3077

Proper Shipping Name Environmentally hazardous substance, solid, n.o.s.
(tetraethylthiuram disulfide)

Sea transport (IMDG-code/ IMO)

IMO/IMDG code		Class	9
Packing group	III	UN number	3077
EMS	F-A, S-F	Subsidiary Risk	
Marine pollutant	no		
Proper Shipping Name	Environmentally hazardous substance, solid, n.o.s. (tetraethylthiuram disulfide)		

Air transport (ICAO-TI/ IATA-DGR)

ICAO-TI/IATA-DGR		UN number	3077
Class	9	Packing group	III
Proper Shipping Name	Environmentally hazardous substance, solid, n.o.s. (tetraethylthiuram disulfide)		

****** SECTION 15 – REGULATORY INFORMATION ******

Chemical description: Tetraethylthiuram disulfide Labelling according to EC directives

EC-number: See section 2

Classification based on: Annex-1 to directive 67/548/EEC

Symbol(s) HARMFUL (Xn) DANGEROUS FOR THE ENVIRONMENT (N)

R(isk) phrase(s): R22 Harmful if swallowed
R48/22 Harmful: danger of serious damage to health by prolonged exposure
if swallowed
R43 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 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 61 Avoid release to the environment. Refer to special
instructions/Safety data sheets

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

****** SECTION 16 – ADDITIONAL INFORMATION ******

MSDS Creation Date: 2/1/2006 **Revision #0 Date:** Original.

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