Document No: PWC-MSDS-005

MSDS for Tetraethylthiuram disulfide, 97%

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

MSDS Name: Tetraethylthiuram disulfide, 97%

Synonyms:

Bis (diethylthiocarbamoyl) disulfide, Disulfiram, TETD

Company Identification:

Puyang Willing Chemicals Co. LTD.

Industry and Commercial Model Zone

Puyang City, Henan, China

dyang orcy, nenan, on

457063

For other information call:

00 86 21 6484 0100

00 86 137 0164 5278

Contact:

Kuber Tan

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

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

Hazard Symbols: XN Risk Phrases: 22

*** SECTION 3 - HAZARDS IDENTIFICATION ***

EMERGENCY OVERVIEW

Harmful if swallowed.

Potential Health Effects

Eye:

May cause eye irritation.

Skin:

May cause skin irritation.

Ingestion:

Harmful if swallowed.

Inhalation:



May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.

Chronic:

Not available.

*** SECTION 4 - FIRST AID MEASURES ***

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid.

Skin:

Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion:

Get medical aid. Wash mouth out with water.

Inhalation:

Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Treat symptomatically and supportively.

*** SECTION 5 - FIRE FIGHTING MEASURES ***

General Information:

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

Extinguishing Media:

In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

Autoignition Temperature: Not available.

Flash Point: Not available. NFPA Rating: Not published.

Explosion Limits, Lower: Not available.

Upper: Not available.

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for



disposal.

*** SECTION 7 - HANDLING and STORAGE ***

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

Storage:

Store in a cool, dry place. Keep container closed when not in use.

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

Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

Personal Protective Equipment

Eyes:

Wear safety glasses and chemical goggles if splashing is possible.

Skin:

Wear appropriate protective gloves and clothing to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to minimize contact with skin.

Respirators:

Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

*** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State:

Powder

Appearance:

Light yellow

Odor:

Not available.

pH:

Not available.

Vapor Pressure:

Not available.

Viscosity:

Not available.

Boiling Point:

Not available.



Freezing/Melting Point:

66.00 - 72.00 deg C

Decomposition Temperature: Not available.

Solubility:

0.02g/100ml water

Specific Gravity/Density:

Not available.

Molecular Formula:

[(C2H5) 2NCS2-] 2

Molecular Weight:

296, 51

Loss on Drying:

0.40% Max.

Ash:

0.30 Max.

Residues on 250um sieve:

0.50% Max.

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials.

Incompatibilities with Other Materials:

Strong oxidizing agents.

Hazardous Decomposition Products:

Irritating and toxic fumes and gases.

Hazardous Polymerization: Has not been reported.

*** SECTION 11 - TOXICOLOGICAL INFORMATION ***

RTECS#:

CAS# 97-77-8: J01225000

LD50/LC50:

CAS# 97-77-8: Oral, mouse: LD50 = 1980 mg/kg; Oral, rabbit: LD50 =

2050 mg/kg; Oral, rat: LD50 = 500 mg/kg.

Carcinogenicity:

Tetraethylthiuram disulfide -

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Group 3 carcinogen

See actual entry in RTECS for complete information.

*** SECTION 12 - ECOLOGICAL INFORMATION ***

For further information, contact Puyang Willing Chemicals CO. LTD.

Contact: Mr. Wang Ping Sheng Contact No.: 0086 393 4840366

Fax:

0086 393 3550208

*** SECTION 13 - DISPOSAL CONSIDERATIONS ***

Dispose of in a manner consistent with federal, state, and local regulations.

**** SECTION 14 - TRANSPORT INFORMATION ****

US DOT

No information available

IMO

Not regulated as a hazardous material.

IATA

Not regulated as a hazardous material.

RID/ADR

Not regulated as a hazardous material.

Canadian TDG

No information available.

**** SECTION 15 - REGULATORY INFORMATION ****

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:

R 22 Harmful if swallowed.

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 97-77-8: 2

Canada

CAS# 97-77-8 is listed on Canada's DSL/NDSL List.

CAS# 97-77-8 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 97-77-8: OEL-AUSTRALIA:TWA 2 mg/m3

OEL-BELGIUM: TWA 2 mg/m3

OEL-FINLAND: TWA 2 mg/m3; STEL 6 mg/m3

OEL-FRANCE: TWA 2 mg/m3

OEL-GERMANY: TWA 2 mg/m3

OEL-THE NETHERLANDS: TWA 2 mg/m3

OEL-RUSSIA: STEL 1 mg/m3

OEL-SWITZERLAND: TWA 2 mg/m3

OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV

OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

US FEDERAL

TSCA

CAS# 97-77-8 is listed on the TSCA inventory.



*** SECTION 16 - ADDITIONAL INFORMATION ***

MSDS Creation Date: 2/1/2003 Revision #0 Date: Original.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.

