

## WILLING CHEM Document No: PWCC-MSDS-013

### MSDS for Zinc Dimethyldithiocarbamate

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

**Product Name:** Accelerator PZ  
**Chemical Name:** Zinc Dimethyldithiocarbamate  
**Synonyms:** WILLING PZ; ZDMC  
**Company Identification:** Puyang Willing Chemicals Co. LTD.  
Industry and Commercial Model Zone  
Puyang City, Henan, China  
457163

**For other information call:** 00 86 21 3422 5991  
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**Contact:** Mr. Kuber Tan

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

CAS#	Chemical Name	%	EINECS#
137-30-4	Zinc Dimethyldithiocarbamate	96-99	205-288-3

**Hazard Symbols:** Xn harmful

**Risk Phrases:**

R22 Harmful if swallowed.

R36/37/38 Irritating to eyes, respiratory system and skin.

R68 Possible risk of irreversible effects.

#### \*\*\*\* SECTION 3 - HAZARDS IDENTIFICATION \*\*\*\*

**Hazard Information Emergency Overview:** DANGER! Combustible dust - explosion potential. May be fatal if inhaled. This material is irritating to skin, eyes and respiratory tract. May cause alcohol intolerance.

**Eye Contact:** Causes mild eye irritation . Mild Eye Irritation: signs/symptoms can include redness, swelling, pain, and tearing.

**Skin Contact:** May cause an allergic skin reaction. May be absorbed through the skin and product effects similar to those caused by inhalation and/or ingestion.

**Inhalation:** May be fatal if inhaled. Exposure to dust particles generated from this material may cause irritation of the respiratory tract. Inhalation may cause alcohol intolerance  
**Ingestion:** May cause alcohol intolerance (Antabuse Effect) May cause headache, dizziness, nausea, vomiting, gastrointestinal irritation.

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

**In Eyes:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

**On Skin:** Remove contaminated clothing and launder before reuse. Wash with soap and water. If irritation persists or signs of toxicity occur, seek medical attention.

**Inhaled:** Seek immediate medical attention! May be fatal if inhaled! Move person to fresh air. Have trained personnel administer oxygen.

**Swallowed:** If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

**Notes To Physician:** Treat symptomatically. Exposure by ingestion, inhalation or skin absorption may cause alcohol intolerance (Antabuse Effect) Monitor respiratory system function Observe for signs of respiratory distress.

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

**Flash Point (°F/C):** 200°F / 93°C

**Flash Point Method:** Tag Closed Cup

**Autoignition Temp. (°F/C):** Not Determined

**Lower Explosion Limit in Air (LEL):** Not determined.

**Upper Explosion Limit in Air (UEL):** Not determined.

**Extinguishing Media:** Water fog, carbon dioxide, foam, dry chemical

**Special Exposure Hazards:** Fight fire from a safe distance and from a protected location. Use water spray to cool fire exposed surfaces. Decomposition in fire may produce toxic gases. Do not allow runoff to enter waterways.

**Special Protective Equipment:** Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

**Unusual Fire/Explosion Hazards:** Toxic emissions may result if product is involved in a fire.

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

**Spill Procedures:** Wear protective equipment specified. Avoid the generation of dust. Sweep, vacuum, or shovel and place into closable container for disposal.

**Procedure for Cleaning/Absorption:** Isolate area and remove sources of friction, impact, heat, low level electrical current, and RF energy. Scoop up and remove. Do NOT spread spilled product with water.

**CERCLA Reportable Quantity (RQ):** 1 Pound

### \*\*\*\* SECTION 7 – HANDLING AND STORAGE\*\*\*\*

**Handling:** Avoid contact with eyes, skin and clothing. Avoid generating or breathing dust. Wash thoroughly with soap and water after handling. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Reclose containers of unused product. Keep containers tightly closed when not in use. Do not reuse this container.

**Storage:** Store closed containers in a cool, dry, well-ventilated area. Store away from strong oxidizing materials. Avoid exposure to direct sunlight.

### \*\*\*\* SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION\*\*\*\*

**Eye Protection:** Wear safety glasses or goggles to protect against exposure.

**Skin Protection:** Normal work coveralls. Launder contaminated clothing before reuse.

**Gloves:** Use gloves as a standard industrial handling procedure. Appropriate chemical resistant gloves should be worn. All cleanable impervious glove types are acceptable.

**Respiratory Protection:** Use in a well ventilated area. Use respirators in accordance with the code of federal regulations, labor part 1910.134 and reduce occupational exposure to the lowest achievable limits. Appropriate respiratory protection shall be worn when applied engineering controls are not adequate to protect against inhalation exposure. Use NIOSH approved dust respirator. Firefighting; use a Positive Pressure Demand Full Face Self Contained Breathing Apparatus.

**Ventilation:** General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits during the use of this product. Adequate ventilation should be provided to keep dust concentrations below acceptable exposure limits. Discharge from the ventilation system should comply with the applicable air pollutions control regulations. Eliminate ignition sources.

**Airborne Exposure Limits:** OSHA PEL/8-Hr TWA: None Established. Nuisance Dust. OSHA PEL/8Hr-TWA = 15 mg/m<sup>3</sup> (Total Dust). OSHA PEL/8-Hr TWA = 05 mg/m<sup>3</sup> (Respirable Dust). ACGIH TLV/8-Hr TWA = 10 mg/m<sup>3</sup>. White Mineral Oil OSHA PEL/8-Hr TWA = 5mg/m<sup>3</sup> ACGIH TLV/8-Hr TWA = 5mg/m<sup>3</sup>.

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

<b>Appearance:</b>	Off-white powder
<b>Odor:</b>	SLIGHT
<b>pH:</b>	N/A
<b>Specific Gravity:</b>	1.66 @20°C
<b>Density:</b>	Unknown
<b>Bulk Density:</b>	355-395 kg/m <sup>3</sup> @20°C
<b>Melting Point (°F/C):</b>	460°F / 238°C
<b>Boiling Point (°F/C):</b>	Not Determined
<b>Vapor Pressure:</b>	Negligible @ 20°C
<b>Vapor Density (Air=1):</b>	Not Determined

**% Volatile by Volume:** <0.5% by weight  
**Solubility in Water:** INSOLUBLE  
**Other Solubility:** Soluble in Benzene Carbon Disulfide Organic liquids, including fats and oils  
Acetone  
**Viscosity:** Not determined.  
**Other Data:** Zinc content =20–22%  
Loss on drying = 0.3% max  
Residues on 63 um sieve = 0.5% max  
Oil content = 0–2% (Upon buyer's request)  
**Molecular Weight:** 305.8  
**Molecular Formula:** C6-H12-N2-S4-Zn

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

**Chemical Stability:** Stable when stored at room temperature in closed, original container.  
Stable under normal conditions of handling, use and transportation.

**Hazardous Polymerization:** Will not occur

**Conditions to Avoid:** Keep away from heat, sparks and flame. Avoid contact with strong oxidants such as liquid chlorine and concentrated oxygen.

**Materials to Avoid:** Strong oxidizing agents. Acids. Contact with acids may produce toxic gas.

**Hazardous Decomposition Products:** Carbon monoxide. Oxides of nitrogen. Oxides of sulfur Toxic zinc metal fumes

**Additional Guidelines:** Not Applicable

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

**Target Organs Acute Oral LD50 (mg/kg):** >1400 mg/kg  
**Acute Dermal LD50 (mg/kg):** >6000 mg/kg  
**Acute Inhalation LC50 (mg/l):** 4Hr LC50 = 0.26-0.81 mg/l  
**Principle Routes of Exposure:** Dermal - skin. Inhalation.

**Ingestion:** May cause alcohol intolerance (Antabuse Effect) May cause headache, dizziness, nausea, vomiting, gastrointestinal irritation.

**Skin Contact:** May cause an allergic skin reaction. May be absorbed through the skin and product effects similar to those caused by inhalation and/or ingestion.

**Inhalation:** May be fatal if inhaled. Exposure to dust particles generated from this material may cause irritation of the respiratory tract. Inhalation may cause alcohol intolerance

**Eye Contact:** Causes mild eye irritation . Mild Eye Irritation: signs/symptoms can include redness, swelling, pain, and tearing.

**Aggravated Conditions:** Alcohol consumption problems. Pulmonary disorders. This material or its emissions may cause an allergic or sensitization reaction and thereby aggravate systemic disease.

**Carcinogenicity Comment:** This product or one of its ingredients present 0.1% or more is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC, or OSHA. Carcinogenic:

Category 3 NOTE: May react with nitrosating agents during rubber vulcanization to form nitrosamines. Some nitrosamines are suspect human carcinogens.

**Other:** Decomposition products and fumes from vulcanization and cross-linking may cause eye, skin and respiratory sensitization. May be a skin sensitizer.

**Primary Irritation Effect:** Moderately irritating. Possible sensitizer.

**Carcinogenicity:** Both negative and positive results in standard tests using animals, animal and bacterial cells.

**Genotoxicity:** Animal studies have shown possible birth defects.

**Reproductive/Developmental Toxicity:**

Animal studies show adverse effects in both males and females.

#### \*\*\*\* SECTION 12 – ECOLOGICAL INFORMATION\*\*\*\*

**Acute Fish Toxicity:** 96Hr LC50 Rainbow Trout = 0.75 mg/l. 96Hr LC50 Bluegill Sunfish = 1.20 mg/l. 5Hr LC50 Goldfish = 5.0 mg/l.

**Acute Crustaceans Toxicity:** 48Hr EC50 Daphnia Magna: 0.23 mg/l.

**Acute Algae Toxicity:** Not determined

**Octanol/Water Coefficient:** 1.086 log Kow

**Chemical Fate Information:** Rapidly degraded by ultraviolet light, heat and moisture. Moderately bound to soil.

**Other Information:** LD50 Redwing Blackbird = 100 mg/kg.

#### \*\*\*\* SECTION 13 – DISPOSAL CONSIDERATIONS\*\*\*\*

**Disposal of Waste Method:** This material is a HAZARDOUS WASTE. Incineration recommended in approved incinerator according to federal, state, and local regulations. Treatment, storage, reuse and disposal of the waste material must conform to all applicable federal, state and local laws and regulations.

**Contaminated Packaging:** This bag may contain residue of a hazardous material. Some authorities may regulate such containers as hazardous waste. Dispose of container according to national or local regulations. Do NOT reuse container.

#### \*\*\*\* SECTION 14 – TRANSPORT INFORMATION\*\*\*\*

##### Land transport

**ADR class** 6.1

**RID class** 6.1

**Hazard Identification No.** 66

**TREM-Card** yes

**ADR/RID packing group** II

**Substance Identification No.** 2811

**UN number** 2811

**Proper Shipping Name** Toxic solid, organic, n.o.s. (zinc dimethyldithiocarbamate) TOXIC SOLID, ORGANIC, N.O.S. (Zinc dimethyldithiocarbamate)

##### Sea transport (IMDG-code / IMO)

**IMO/IMDG code**

**Class**

6.1

<b>Packing group</b>	II	<b>UN number</b>	2811
<b>EMS</b>	F-A, S-A	<b>Subsidiary Risk</b>	
<b>Marine pollutant</b>	yes		
<b>Proper Shipping Name</b> Toxic solid, organic, n.o.s. (zinc dimethyldithiocarbamate)			
Air transport (ICAO-TI / IATA-DGR)			
<b>ICAO-TI/IATA-DGR</b>		<b>UN number</b>	2811
<b>Class</b>	6.1	<b>Packing group</b>	II
<b>Proper Shipping Name</b> Toxic solid, organic, n.o.s. (zinc dimethyldithiocarbamate)			

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

**Worldwide Inventory Status TSCA (USA):** Listed

**Canadian DSL:** Listed

**Canadian NDSL:** N/A

**EINECS/ELINCS (Europe):** Listed

**Japanese Inventory (ENCS):** Listed

**Korean Chemical Inventory (ECL):** Listed

**Australian Chemical Inventories (AICS):** Listed

**New Zealand (NZ):** Listed

**Phillipines (PICCS) Inventory:** Listed

**China (CLECS):** Listed

**US Regulatory Rules SARA Section 302:** Not Applicable

**SARA 311/312 Hazard Categories:** Immediate

**SARA 313 Chemical:** As "Zinc Compounds".

**RCRA Status:** P205 - ACUTELY HAZARDOUS WASTE

**Other Regulations:**

**California Proposition 65:** NONE

**New Jersey Right-to-Know List:** Listed

**Pennsylvania Right to Know List:** Listed

**Florida Right to Know:** Listed

**Minnesota Right to Know:** Listed

**MA Right to Know Law:** Listed

**FDA Status 21 CFR:** Regulated for Use under the following sections of 21 CFR: 177.2600 Rubber Articles Intended for Repeated Use in Food Contact. 175.105 Components of Adhesives. 178.3120 Animal Glue.

**Canadian Regulations WHMIS Hazard Class:** D1A VERY TOXIC MATERIALS. D2A VERY TOXIC MATERIALS D2B TOXIC MATERIALS / Materials Causing Other Toxic Effects

**NPRI:** N/A

**Labelling according to EU guidelines:**

The products has been classified and marked in accordance with EU Directives/Ordinance on Hazardous Materials.

**Code letter and hazard designation of product:** Xn harmful

**Risk Phrases:**

22 Harmful if swallowed.

36/37/38 Irritating to eyes, respiratory system and skin.

68 Possible risk of irreversible effects.

**Safety phrases:**

2 Keep out of the reach of children.

36/37 Wear suitable protective clothing and gloves.

**National regulations:**

**Water hazard class:** water hazard class 3 (self-assessment) extremely hazardous for water

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

**MSDS Creation Date: 18/12/2009 Revision #2.0**

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