

MATERIAL SAFETY DATA SHEET

: According to EC-directive 2001/58/EC

Rubber Accelerator ZDMC(PZ)

HS Code: 29302000.90

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

| | |
|----------------------------|---|
| Product label name | Zinc dimethyl-dithiocarbamate |
| Supplier | Qingdao YLSCH Industry&Trade Co.,Ltd Room 501,2-3 Unit. No.8,Zhengzhou Road, Qingdao,China. TEL: +86 18661665800 |
| Emergency telephone | TEL: +86 18661665800 |
| Intended use | Rubber Vulcanization Accelerator |

2. COMPOSITION/INFORMATION ON INGREDIENTS

| | |
|-----------------------------|---|
| Chemical name | 二甲基二硫代氨基甲酸锌 Zinc dimethyl-dithiocarbamate |
| CAS NO. | 137-30-4 |
| Chemical description | White granule |
| TSCA NO. | none |
| EINECS NO. | none |
| Other information | C ₆ H ₁₂ N ₂ S ₄ Zn |

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

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

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| Inhalation | Move to fresh air. If symptoms persist, seek medical advice. |
| Skin | Remove all contaminated clothing immediately. Wash off with plenty of soap and water. Seek medical advice if irritation develops. Launder clothes before reuse. |
| 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. |

5. FIRE-FIGHTING MEASURES

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| Extinguishing media | Waterspray, water mist, foam, dry chemical powder, CO ₂ |
| Unsuitable extinguishing media | None known. |
| Special exposure hazards | None known. |
| Hazardous decomposition/ Combustion products | Carbon monoxide (CO), Sulfur oxides (SO _x), 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. |

6. ACCIDENTAL RELEASE MEASURES

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

7. HANDLING AND STORAGE

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| Handling | Avoid contact with skin. Avoid dust generation. No dust formation to be expected under normal conditions of handling. In the unlikely case of dust formation: Avoid breathing dust. |
| Fire and explosion prevention | No specific recommendations. |
| Storage requirements | Store in a dry and cool place. |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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|-----------------------------|---|
| Engineering controls | Avoid dust generation.Ensure good ventilation and local exhaustion of the working area. |
| Exposure limits | |

**Name:** Zinc dimethyl-dithiocarbamate

In this country no exposure limit has been established

Personal protection**Respiratory**

Avoid breathing dust. In case of insufficient ventilation, wear suitable respiratory equipment.

Hand

Wear suitable gloves.

Eye

Wear safety goggles.

Skin and body

Wear suitable protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|---|---|--|---------------------------|
| Appearance | White granule | Colour | White |
| Odour | ---- | Boiling point | ---- |
| Melting point\geq | 240 $^{\circ}$ C | Flash point | Approx. 200 $^{\circ}$ C. |
| Flammability | ---- | Explosion limits | ---- |
| Explosive properties | | Auto ignition temperature | ---- |
| Oxidizing properties | ---- | Vapour pressure | ---- |
| Density | 1.66g/cm ³ (20 $^{\circ}$ C) | Bulk density | ---- |
| Solubility in water | Insoluble in water | Solubility in other solvents | Acetone benzene alcohol |
| pH value | ---- | Partition coefficient | ---- |
| Residues (150μm)% Max | 0.1(Max) | Relative vapour density | ---- |
| Viscosity | ---- | Assay content % \geq | 95 |
| Strength of grain(N) | 0.6-2.5 | Zinc content % | 20.0-23.0 |

10. STABILITY AND REACTIVITY

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| 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. |

11. TOXICOLOGICAL INFORMATION

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| Name | Zinc dimethyl-dithiocarbamate |
| Acute toxicity | |
| Oral LG50 | rat: > 1270mg/kg. |
| Dermal LD50 | rabbit:>2000 mg/kg. |
| Irritation | rat: 4 hours: 0.026-0.081 mg/l (dust) |

| | |
|-------------|---------------------|
| Skin | Non-irritating |
| Eye | Severely irritating |

12. ECOLOGICAL INFORMATION

| | |
|---------------------------|--|
| Name | Zinc dimethyl-dithiocarbamate |
| Ecotoxicity | |
| Fish | 96h-LC50 (Severely irritating): 0.75 mg/l (Lit.). No Observed Effect Concentration (NOEC) (Danio rerio): < 0.032 mg/l. |
| Daphnia | 48h-EC50 (Daphnia magna): 0.14 mg/l (Lit.). |
| Algae | 96 h-EC50 (Chlorella pyrenoidosa): 1.2 mg/l (Lit.) |
| Degradation Biotic | Not readily biodegradable. |

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORT INFORMATION

| | | | |
|--|---------------------------------|----------------------------------|------|
| Land transport (ADR/ RID) | | | |
| ADR class | 9 | RID class | 9 |
| ADR/RID packing group | ---- | Hazard Identification No. | 90 |
| Substance Identification No. | 3077 | UN number | 3077 |
| Environmentally hazardous substance, solid, n.o.s. | | | |
| Proper Shipping Name | (Zinc dimethyl-dithiocarbamate) | | |
| 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 | (Zinc dimethyl-dithiocarbamate) | | |

15. REGULATORY INFORMATION

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|---|---|
| Chemical description | Zinc dimethyl-dithiocarbamate |
| Labelling according to EC directives | |
| EC-number | Not relevant |
| Classification based on | Annex-1 to directive 67/548/EEC |
| | R 43 May cause sensitization by skin contact |
| R(isk) phrase(s) | 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) | 3 (VwVwS Anhang 4 Nr. 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.