



MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

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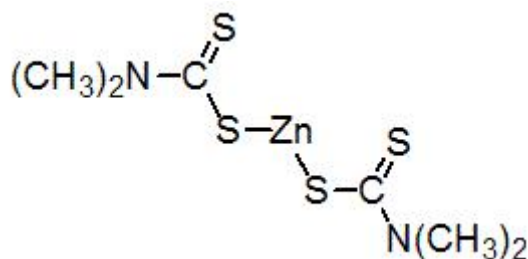
1. Chemical Product Identification

Product Name: Ziram

Molecular Formula: $C_6H_{12}N_2S_4Zn$

Molecular Weight: 305.84 g/mol

Structural Formula:



Chemical Name: zinc bis(dimethyldithiocarbamate)

Form: Solid

Color: White.

Odor: Negligible odor

CAS No.: 137-30-4

2. Composition / Information On Ingredients

Composition	CAS No.	Content %
Ziram	137-30-4	90.0
Other ingredients	--	10.0



3. Hazards Identification

KEEP OUT OF REACH OF CHILDREN – CAUTION - POISON. Corrosive. Causes irreversible eye damage. May be fatal if inhaled. Do not get in eyes, on skin, or on clothing. Wear goggles or faceshield and rubber gloves when handling. Do not breathe dust or spray mist. Harmful if absorbed through skin. Skin contact may cause irritation and sensitization. May cause irritation of the nose and throat. Inhalation of dust may cause severe mucous membrane and respiratory irritation. May cause systemic poisoning with symptoms of increasing paralysis, numbness, and weakness in the extremities and death. Wash thoroughly with soap and water after handling, and before eating, drinking or smoking. Primary routes of entry are Inhalation, eye contact and skin contact.

4. First Aid Measures

Inhalation: Remove victim to fresh air. Keep victim warm and at rest. If breathing is difficult: give oxygen. If not breathing: apply artificial respiration.

Get medical attention.

Ingestion: Induce vomiting. Never give anything by mouth to an unconscious person. Wash out mouth with water. Consult a doctor.

Skin contact: Remove contaminated clothing. Wash off with plenty of water and soap. Consult a doctor in the event of any complaints.

Eye contact: Wash off with plenty of water for at least 15 minutes. If pain persists, consult an eye specialist.

Notes to a physician: There is no specific antidote. Treat symptomatically and give supportive therapy. If ingested perform gastric lavage and administer activated charcoal.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides (NO_x), Sulphur oxides, Zinc/zinc oxides

Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary

Further information



no data available

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Reference to other sections

For disposal see section 13.

7. Handling And Storage

HANDLING: Use only with adequate ventilation and appropriate protective equipment. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

STORAGE: Keep out of reach of children and animals. Store in a cool, dry place and avoid excess heat. Store in original containers only. Carefully open containers. After partial use, fold and roll back bags, clamp and close tightly. Do not contaminate water, food or feed by storage and disposal.

8. Exposure Controls/Personal Protection

Engineering measures: Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.

Hygiene measures: Wash hands thoroughly after handling. Wash clothing separately before re-use.

Respiratory system: During spraying wear suitable respiratory equipment.



Skin and body: Wear suitable protective clothing and chemical resistant boots.

Hands: Wear suitable gloves.

Eyes: Safety goggles or face shield.

9. Physical and Chemical Properties

Appearance: White powder

Melting point: 251 - 252.5 °C

PH: 6.0 - 8.0

Solubility : in water 0.03mg/L@20°C

Solubility in other solvents: Acetone 2,3 g/l at 20°C, Methanol 0,11 g/l at 20 °C

Surface tension: 73 mN/m at 16 °C

Fineness (through 200mesh): ≥98%

Specific gravity: 1.66 at 25°C

10. Stability and Reactivity

Stability: Stable under normal dry conditions.

Conditions to avoid : Avoid exposure to excessive heat

Materials to avoid: iron, copper, strong oxidizing agents, acids, mercury Hazardous reactions:

Hazardous decomposition products: Decomposed by excessive heat and acids. Thermal decomposition will generate oxides of carbon, oxides of nitrogen, and sulfur. Acid decomposition may evolve carbon disulfide.

Hazardous polymerization: will not occur.

11. Toxicological Information

Acute toxicity

Acute oral LD50 for rat (male): 267 a.i.mg/kg.

Acute dermal LD50 for rat: >2000 a.i.mg/kg.

Inhalation LC50 (4 h) for rat: 0.06 a.i. mg/L.

Skin irritation: Non irritating (rabbit).

Eye irritation: Highly- irritating to eyes (rabbits)

Sensitization: skin sensitiser (guinea pigs).



12. Ecological And Ecotoxicological Information

Effect on birds: high toxicity to birds, acute oral LD50 for Bobwhites quail is 97 a.i.mg/kg.

Effect on fish: high toxicity to fish, acute 96 hour LC50 for Bluegill sunfish is 0.00097 a.i.mg/L.

Effect on aquatic invertebrates: high toxicity to aquatic invertebrates, acute 48 hour EC50 for Daphnia magna is 0.048 a.i.mg/L.

Effect on algae: moderate toxicity to algae, acute 72 hour EC50 for Pseudokirchneriella subcapitata is 0.066 a.i.mg/L.

Effect on honeybees: low toxicity to honeybees, contact acute 48 hour LD50 is >100 a.i.µg/bee. Effect on earthworms: moderate toxicity to earthworms, acute 14 day LC50 for Eisenia foetida is 140 a.i.mg/kg.

13. Disposal Considerations

Do not reuse containers for any purpose. Completely empty bag into application equipment. Contact your local dealer/distributor for the location of the nearest collection site. Before taking container to the collection site: make the empty container unsuitable for further use. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Do not contaminate water, food, or feed by storage or disposal.

14. Transport Information

Not Applicable

15. Regulatory Information

Not applicable

16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of



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this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.