



## SAFETY DATA SHEET

# MIZAR GRANUFLO®

Date of Issue: 25 February 2016

### 1. SUBSTANCE/PREPARATION AND COMPANY IDENTIFICATION

**Chemical name of active ingredient(s):** Ziram

**Recommended use:** Fungicide

**Supplier:** Etec Crop Solutions Limited  
PO Box 51584  
Pakuranga  
Phone 0800 100 325

**Emergency telephone number:** 0800 Poison (0800 764 766) 24 Hours

### 2. HAZARDS IDENTIFICATION

**Hazard Classification:** Toxic - 6.1D, 6.4A, 6.5B, 6.9B,  
Ecotoxic - 9.1A, 9.3C  
Approved Handler Applies

**Required identification Details:** **HARMFUL  
ECOTOXIC**  
May be harmful if swallowed, inhaled or absorbed through skin.  
May cause eye – risk of serious damage to eyes.  
May cause sensitization by skin contact.  
Repeated exposure at high doses may cause harm to the liver,  
central nervous system, and thyroid.  
Very toxic to aquatic organisms; may cause long-term adverse  
effects in aquatic environment.  
Harmful to terrestrial vertebrates.  
Risk of dust explosion.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Substance/preparation Information on hazardous ingredients

Common name	CAS No	%
Ingredient: Ziram	137-30-4	75
Inert Ingredients:	Non-hazardous	25

### 4. FIRST-AID MEASURES

#### Description of necessary first aid measures:

General: If symptoms persist seek medical advice. Show this Safety Data sheet to medical practitioner.

#### Effects and symptoms

#### First-aid measures

Symptoms of over exposure include dizziness, confusion, drowsiness, lethargy, ataxia, headaches, or coma; abdominal pain, nausea, vomiting, diarrhoea; muscle weakness and ascending paralysis; respiratory paralysis; cough; skin rash and eye irritation. May also induce alcohol intolerance.

<b>Inhalation:</b>	Remove from exposure. Remove to fresh air. Apply artificial respiration if necessary. Get medical help if breathing difficulty persists.
<b>Ingestion:</b>	Give a glass or two of water. Do not induce vomiting. Treat symptomatically. Get medical help. Never give anything by mouth to an unconscious person.
<b>Skin contact:</b>	May cause skin irritation. Remove contaminated clothing. Wash with soap and water. If irritation persists see a doctor.
<b>Eye contact:</b>	May cause eye irritation. Immediately flush with water for 15 minutes. If irritation persists see a doctor.
<b>Notes to a physician:</b>	There is no specific antidote. Treatment should be symptomatic after decontamination. Possible mucous damage may contraindicate gastric lavage. After poisoning with Ziram, alcohol should be avoided for at least 10 days.

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## 5. FIRE-FIGHTING MEASURES

<b>HAZCHEM Code:</b>	<b>22</b>
<b>Extinguishing media :</b>	Alcohol resistant foam, water spray, Carbon Dioxide, dry chemical. DO NOT USE HIGH VOLUME WATER JET.
<b>Hazardous thermal (de)composition products:</b>	Heating to decomposition generates oxides of carbon, nitrogen and sulphur. Dust may form explosive mixture in air.. Heating or fire can release toxic gas.
<b>Protection of fire-fighters:</b>	Wear full emergency equipment and self-contained breathing apparatus. Fight fire from upwind.

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## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions:</b>	Avoid contact with skin, eyes and clothing. Wear long sleeved shirt, long pants, waterproof gloves and safety goggles or face shield. Do not eat, drink or smoke when using. Wash hands and face before meals and after work. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
<b>Environmental precautions:</b>	Remove immediately adhering matter. Contain spill, do not allow material to enter drains, sewers or bodies of water. Keep unprotected persons and animals out of the area.
<b>Methods for cleaning up:</b>	Keep dry or when wet contain run off. Shovel or sweep up dry material and bury in an approved landfill. Do not flush with water. If in a liquid state, soak up with saw dust or other inert absorbent material and dispose of in an approved land fill or chemical waste container.

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## 7. HANDLING AND STORAGE

Keep out of reach of children or animals.

<b>Handling:</b>	Keep dry and out of reach of children. Use in accordance with local regulations. Ensure there is appropriate exhaust ventilation. Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Do not breathe vapours/dust.
<b>Storage:</b>	Use only in area equipped with a safety shower. Store in original container tightly closed in a locked, dry, well ventilated place away from feed, seeds and foodstuffs. Keep away from sparks, heat and flames. Use spark-proof tools and explosion- proof equipment.
<b>Specific use(s):</b>	Dispose of as special waste in compliance with local and national

regulations.

**Packaging materials:** Multiwall paper bags, 10 kg

**Incompatible products:** Do not store near acids

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Workplace Exposure Guidelines

**Workplace exposure standards:** Not set

**Exposure Standards outside:** Not set

**The workplace:**

### Engineering measures

**Exposure control measures:** Local exhaust.  
Ventilate all transport vehicles prior to unloading.  
Ensure stores are adequately ventilated.

### Personal Protective Equipment

**Detail specifications for equipment:**

**Respiratory system:** Mizar Granuflo is a Granular formulation that overcomes the normal hazards associated with dust.

A full face shield when mixing is adequate protection in normal use. When dust is generated, a properly fitted and approved TC-21C dust/mist filtering respirator or any approved N,R, P, or SHE filter is required.

Equipment is accordance with local and national regulations.

**Skin and body:**

Long sleeved shirt and pants worn outside boots. Use protective material according to the amount and concentration of the substance stored.

**Hands:**

Protect hands with waterproof gloves made from materials such as polyethylene or polyvinyl chloride.

**Eyes:**

Full face shield and tight fitting safety goggles when mixing and applying.

**General hygiene:**

Wash hands and exposed skin immediately after use. Do not smoke, eat or drink when using.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Solid. Water dispersible granule

**Colour:** Creamy white to light brown granule

**Odour:** Odourless

**pH:** 5.3 (4% aqueous suspension)

**Vapour Pressure:** Not applicable – Very low

**Vapour Density:** Not applicable

**Boiling Point:** Not applicable

**Freezing/melting point:** Not available

**Solubility:** Disperses in water. Ziram is practically insoluble.

**Specific gravity or density:** Approx 0.60 g/ml

**Information for flammable material**

**including:**

- Lower and upper flammability limits
- Flashpoint (state test Method

Not auto-inflammable.

**Auto – ignition Temperature:** Not applicable

**Octanol/water partition coefficient:** Log P<sub>ow</sub> = 1.086

**Explosion properties:** Not explosive

**Oxidation properties:** Not an oxidizer

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## 10. STABILITY AND REACTIVITY

**Stability:** Stable under normal conditions of use.

**Conditions to avoid:** Excessive Heat. Prevent dust formation.  
Hygroscopic – avoid humid air and water.

**Materials to avoid:** Ziram decomposes on heating and in contact with acids. It is incompatible with iron, lime, sulphur, copper and mercury.

**Hazardous decomposition Products:** Combustible material. Burning produces irritant fumes.  
**Hazardous polymerization:** None  
**Specific Data:** Not applicable  
**Hazardous reactions :** None

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## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity – Oral :** Acute Oral LD50 = 478 mg/kg (a.i) (Rat)  
**Acute toxicity - Dermal :** Acute Dermal LD50 > 2,000 mg/kg (a.i) (Rat)  
**Acute toxicity – Inhalation:** LC50 = 0.13 mg/litre 4hr (a.i) (Rat). Respirable ziram is highly toxic by inhalation. However, this is a granular solid. During intended and foreseen applications, no respirable aerosol is formed.

**Skin irritation :** Not irritating to the skin (Rabbit).

**Eye irritation:** Severe eye irritation. Highly irritating to eyes and mucous membranes (Rabbit).

**Sensitization :** The results of a test on guinea pigs showed this substance to be a weak skin sensitizer.

**Chronic toxicity  
Carcinogenicity:** Did not show carcinogenic effects in animal experiments.

**Mutagenicity:** Ziram is mutagenic in some test systems. Did not show mutagenic effects in animal experiments.

**Reproduction toxicity:** Did not show teratogenic effects in animal experiments.

**Other information :** May cause cardiac arrhythmia, headaches, eczema, dermatitis, nausea, shortness of breath.  
More severe effects if alcohol is consumed.

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## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** Very toxic to aquatic organisms. In aquatic environment, toxic to fish. Do not contaminate bodies of water with chemical or empty container. Harmful to terrestrial vertebrates, low toxicity to birds.

**Fish** LC 50 = 0.0097 – 1.7 mg/L  
**Daphnia magna** EC50 = 0.048 mg/L ,48hr (Daphnia)  
**Algae** EC50 = 0.066 mg/L ,120hr (Algae)  
**Bacteria** IC50 : 19.20 mg/L  
**Mobility** minimum  
**Persistence/degradability Soil** Degradation half-life after <2days.  
**Bioaccumulative potential :** minimum

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## 13. DISPOSAL CONSIDERATIONS

**Methods of disposal :** Ensure that any unwanted material is used according to label.

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Dispose of in accordance with local regulations. Waste codes should be assigned by the user based on the application for which the product was used.

Classified as hazardous waste.

Container disposal: Ensure that container is completely empty. Burn if circumstances, especially wind direction permit, otherwise bury in landfill.

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## 14. TRANSPORT INFORMATION - International transport regulations

<b>UN number:</b>	UN No: 3077
<b>Class or Division:</b>	9
<b>Classification Code: EPG</b>	47 Dangerous Goods – initial Emergency Response Guide.
<b>Packing Group:</b>	III
<b>Marine Pollutant:</b>	No
<b>Proper shipping name :</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Contains 75% ziram)
<b>INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA):</b>	N/A

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## 15. REGULATORY INFORMATION

<b>ACVM Registered Number:</b>	<b>P4176</b>
<b>HSNO Approval Code:</b>	<b>HSR000473</b>

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## 16. OTHER INFORMATION

<b>Additional information:</b>	<b>Original Issue Date:</b> 11 April 2011 <b>Revision Date:</b> 25 February 2016 <b>Replaces:</b> ES268
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### **Disclaimer EXCLUSION OF LIABILITY: PLEASE READ**

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