



Material Safety Data Sheet

United Phosphorus, Inc.

| NFPA | PPE | | |
|---|---|--|---|
|  |  |  |  |

Issued Date 07-Feb-2007

Revision Date 02-Jul-2013

Revision Number: 9

1. PRODUCT AND COMPANY IDENTIFICATION

UPI
 630 Freedom Business Center
 Suite 402
 King of Prussia, PA 19406

Emergency Telephone Number
 Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887
 Medical: Rocky Mountain Poison Control Center
 (866) 673-6671 (24hrs)

| <u>Company Information</u> | <u>Contact Information</u> | <u>Phone Number</u> | <u>Available Hrs</u> |
|----------------------------|---|--------------------------------|---|
| UPI | Customer Service R&D Technical Service | 1-800-438-6071 610-223-2180 | 8:00 am to 5:00 pm EST 8:00 am - 5:00 pm (EST) |

Product Name ZIRAM 76DF
EPA Reg # 70506-173
Recommended Use fungicide
Product Code 12-140

2. HAZARDS IDENTIFICATION

Emergency Overview

Causes irreversible eye damage
Harmful by inhalation, in contact with skin and if swallowed
May be fatal if inhaled

DANGER!

Appearance White, Light brown.

Physical State Powder.

Odor Odorless.

Potential Health Effects

- Inhalation
- Skin contact

Eyes

Severely irritating to the eyes. Causes irreversible eye damage.

Skin

May cause mild skin irritation.

Inhalation

Toxic by inhalation. Prolonged inhalation may cause visual disturbances. Irritating to respiratory system.

Ingestion

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients Name

| Chemical Name | CAS-No | Weight % | OSHA PEL |
|--|----------|----------|----------|
| Zinc, bis(dimethylcarbamoedithioaot-kappa S, kappaS)-(T-4) | 137-30-4 | 76 | N/A |

4. FIRST AID MEASURES

Eye Contact

Hold eye open and rinse slowly and gently with water for 15 - 20 minutes.
Remove contact lenses, if present, after 5 minutes, then continue rinsing eye
Call a poison control center or doctor for treatment advice.

Skin Contact

Take off contaminated clothing
Rinse skin immediately with plenty of water for 15-20 minutes
Call a poison control center or doctor for treatment advice.

Inhalation

If breathing is irregular or stopped, administer artificial respiration
May cause allergic respiratory reaction
Call a poison control center or doctor for further treatment advice.

Ingestion

Call a physician or poison control center immediately
May produce an allergic reaction
Do not induce vomiting unless told to do so by a poison control center or doctor
Never give anything by mouth to an unconscious person

Notes to Physician

No information available
Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flammable Explosive Properties

| | | | |
|--------------------------------------|--|-----------------------|----------------------|
| Flash Point | Not available | | |
| Autoignition Temperature | Not available | | |
| Flammability Limits in Air | Not available | | |
| Extnguishing Media | Use: Water spray, Carbon dioxide (CO2), Foam, Dry chemical. | | |
| Fire/Explosion Hazard | Firefighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear and self-contained breathing apparatus. Fire fighting equipment should be thoroughly decontaminated after use. | | |
| Hazardous Combustion Products | carbon disulfide, sulfur dioxide. | | |
| NFPA | Health 2 | Flammability 0 | Instability 0 |

6. ACCIDENTAL RELEASE MEASURES

| | |
|----------------------------------|--|
| Personal Precautions | Avoid contact with the skin and the eyes. Use personal protective equipment. |
| Environmental Precautions | Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. Do not flush into surface water or sanitary sewer system. |
| Methods for Clean-up | Sweep up and shovel into suitable containers for disposal. |

7. HANDLING AND STORAGE

| | |
|-----------------|---|
| Handling | Avoid breathing dust. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Empty containers may contain hazardous residues. |
| Storage | Keep tightly closed in a dry and cool place. Store in an area where cross-contamination with pesticides, fertilizers, food or feed could not occur. |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| | |
|---------------------------------------|--|
| Exposure Guidelines | This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies. |
| Engineering Controls | Investigate engineering techniques to reduce exposures. Local mechanical exhaust ventilation is preferred. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems. PESTICIDE APPLICATORS & WORKERS. THESE WORKERS MUST REFER TO PRODUCT LABELING AND DIRECTIONS FOR USE IN ACCORDANCE WITH EPA WORKER PROTECTION STANDARD 40 CFR PART 170. |
| Personal Protective Equipment | |
| Eye/face Protection | Goggles. Avoid contact with eyes. |
| Skin Protection | Rubber gloves. Wear protective gloves/clothing. |
| Respiratory Protection | For exposure in enclosed areas, wear a respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides(MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N,P,R, or HE filter. For exposure outdoors, wear a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C) or NIOSH approved respirator with any N,R,P, or HE filter. |
| General Hygiene Considerations | Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|----------------------------|-------------------|----------------------------|----------------------|
| Appearance | White Light brown | Odor | Odorless |
| Physical State | Powder | pH | no data available |
| Boiling Point/Range | Not available | Melting Point/Range | Not available |
| Specific Gravity | Not available | Solubility | Dispersible in water |
| Evaporation Rate | Not available | Vapor pressure | Not available |
| Vapor Density | Not available | VOC Content | Not available |
| Viscosity | Not available | Molecular Weight | no data available |
| Bulk Density | no data available | Percent Solids | Not available |
| Percent Volatiles | Not available | | |

10. STABILITY AND REACTIVITY

| | |
|--|---|
| Stability | Stable under recommended storage conditions |
| Conditions to Avoid | Keep away from children |
| Incompatible Materials | Strong oxidizing agents |
| Hazardous Decomposition Products | Oxides of sulfur |
| Possibility of Hazardous Polymerization | Hazardous polymerisation does not occur |

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information

Ziram 76 DF

Single exposure studies indicate that this material is slightly toxic if swallowed (rat LD50 1,889 mg/kg), practically non-toxic if absorbed through skin (rabbit LD50 >5,000 mg/kg), moderately toxic if inhaled (rat 4 hr LC50 < 0.53 mg/l), severely irritating to rabbit eyes and non-irritating to rabbit skin. No skin allergy was observed in guinea pigs following repeated exposure.

Chronic Toxicity

Carcinogenicity

The information below indicates whether any agency has listed any ingredient as a carcinogen.

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|--|-------|---------|-----|------|
| Zinc, bis(dimethylcarbamodithioa t-kappaS, kappaS)-(T-4) | | Group 3 | | |

12. ECOLOGICAL INFORMATION

Ecotoxicity

This material is highly toxic to Daphnia magna (48 hr EC50 0.048 mg/l) and bluegill sunfish (96 hr LC50 0.0097mg/l) and moderately toxic to rainbow trout (96 hr LC50 1.7 mg/l). The reported toxicity to Bobwhite quail is LC50 >5,200 ppm or LD50 97 mg/kg, mallard duck is LC50 5,156 ppm and honeybees is LC50 100 ug/bee.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or rinsate is a violation of Federal law. If the wastes cannot be disposed of by use or according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Contaminated Packaging

Non refillable container. Do not reuse this container. Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

14. TRANSPORT INFORMATION

DOT

| | |
|----------------------|---|
| Proper Shipping Name | Environmentally hazardous substances, solid, n.o.s. (Ziram) |
| Hazard Class | 9 |
| UN-No | 3077 |
| Packing Group | PG III |
| Marine pollutant | Yes. |

ICAO

UN-No UN3077
Proper Shipping Name Environmentally hazardous substance, solid, n.o.s (Ziram)
Hazard Class 9
Packing Group PG III
Description Marine pollutant

IATA

UN-No 3077
Proper Shipping Name Environmentally hazardous substances, solid, n.o.s. (Ziram)
Hazard Class 9
Packing Group PG III
ERG Code 9L
Description Marine pollutant

IMDG/IMO

Proper Shipping Name Environmentally hazardous substances, solid, n.o.s. (Ziram)
Hazard Class 9
UN-No 3077
Packing Group PG III
EmS No. F-A, S-F
Marine pollutant yes

15. REGULATORY INFORMATION

International Inventories

| Chemical Name | TSCA | DSL | NDSL | EINECS/ ELINCS | ENCS | CHINA | KECL | AICS |
|---|---------|-----|------|-------------------|--------------------------------|-------|----------|------|
| Zinc, bis(dimethylcarbamodithioao t-kappaS, kappaS)-(T-4) | Present | X | | X | (9)-607 (9)-605 (2)-1833 | X | KE-03058 | X |

USA

Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

Chronic Health Hazard No
Acute Health Hazard Yes
Fire Hazard No
Sudden Release of Pressure Hazard No
Reactive Hazard No

Clean Water Act

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any HAPs.

CERCLA

| Component | RQ |
|---|-------|
| Zinc, bis(dimethylcarbomodithioaot-kappaS, kappaS)-(T-4) 137-30-4 (76) | 10 lb |

RCRA

| Component | RCRA - D Series Wastes | RCRA - P Series Wastes | RCRA - U Series Wastes |
|---|------------------------|------------------------|------------------------|
| Zinc, bis(dimethylcarbomodithioaot-kappaS, kappaS)-(T-4) 137-30-4 (76) | | P205 | |

Pesticide Information

| Component | FIFRA - Restricted Use | FIFRA - Pesticide Product Other Ingredients | FIFRA - Listing of Pesticide Chemicals | California Pesticides - Restricted Materials |
|--|------------------------|---|--|--|
| Zinc, bis(dimethylcarbomodithioaot-kappa S, kappaS)-(T-4) 137-30-4 (76) | | | X | |

State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

State Right-to-Know

| Chemical Name | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|---|---------------|------------|--------------|----------|--------------|
| Zinc, bis(dimethylcarbomodithioaot- kappaS, kappaS)-(T-4) | X | X | | | |

International Regulations

Mexico - Grade

Not available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

Not determined

16. OTHER INFORMATION

Revision Date 02-Jul-2013

Revision Summary

Reconfirm MSDS set up a revision date for printing

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End of MSDS