



Safety Data Sheet

United Phosphorus, Inc.

Preparation Date 10-May-2015

Revision date 10-May-2015

Revision Number: 1

1. Identification of the Substance/Preparation and of the Company/Undertaking

Product identifier

Product Description: ZIRAM 76DF

Other means of identification

Item#: 12-140
UN-No 3077
Synonyms Not Available
Registration number(s) 70506-173

Recommended use of the chemical and restrictions on use

Recommended use Fungicide.
Uses advised against Activities contrary to label recommendation

Details of the Supplier of the Safety Data Sheet

Supplier Address

United Phosphorus Inc.
630 Freedom Business Center
Suite 402
King of Prussia, PA 19406

Emergency telephone number

Company Phone Number 1-800-438-6071
Emergency telephone number Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887
Medical: Rocky Mountain Poison Control Center
(866) 673-6671 (24hrs)

2. Hazards Identification

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Gases)	Category 1
Acute toxicity - Inhalation (Vapors)	Category 1
Acute toxicity - Inhalation (Dusts/Mists)	Category 3
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2

Label elements

EMERGENCY OVERVIEW

DANGER

hazard statements

HARMFUL IF SWALLOWED
Fatal if inhaled
Causes serious eye damage
May cause an allergic skin reaction
May cause respiratory irritation
May cause damage to organs through prolonged or repeated exposure

		
appearance white light brown	Physical state powder	Odor odorless

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not breathe dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 In case of inadequate ventilation wear respiratory protection
 Wear protective gloves/protective clothing/eye protection/face protection
 Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response

Get medical advice/attention if you feel unwell
 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a POISON CENTER or doctor/physician
 IF ON SKIN: Wash with plenty of soap and water
 If skin irritation or rash occurs: Get medical advice/attention
 Wash contaminated clothing before reuse
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Immediately call a POISON CENTER or doctor/physician
 Call a POISON CENTER or doctor if you feel unwell
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 Rinse mouth

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed
 Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards Not Otherwise Classified (HNOC)**OTHER INFORMATION**

- Very toxic to aquatic life with long lasting effects
- Very toxic to aquatic life
- May be harmful in contact with skin

3. Composition/information on Ingredients

Chemical name	CAS-No	Weight %	Trade secret
Zinc, bis(dimethylcarbamo-dithioaot-kappaS, kappaS)-(T-4)	137-30-4	76	

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First aid measures**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

Wash off immediately with plenty of water removing all contaminated clothes and shoes. Call poison control center or doctor for treatment advice.

Inhalation

Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

Ingestion

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Protection of First-aiders

Use personal protective equipment.

Most Important Symptoms and Effects, Both Acute and Delayed

Most Important Symptoms and Effects No information available.

Indication of Any Immediate Medical Attention and Special Treatment Needed

Notes to physician Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media

Carbon dioxide (CO₂).

Use: Dry chemical. Water spray. alcohol-resistant foam.

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapours.

Hazardous combustion products carbon disulfide, sulfur dioxide.

Explosion data**Protective equipment and precautions for firefighters**

Use personal protective equipment. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures**Personal Precautions**

Wear protective gloves/clothing and eye/face protection. Avoid contact with the skin and the eyes. Wash thoroughly after handling.

Environmental Precautions**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.

Methods and material for containment and cleaning up**Methods for Clean-Up**

Sweep up and shovel into suitable containers for disposal.

7. Handling and Storage

Precautions for safe handling

Handling Wear personal protective equipment. Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Keep out of reach of children.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat. Protect from light. Keep in properly labelled containers.

incompatible materials Strong oxidizing agents.

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.

Personal protective equipment

Eye/Face Protection Use eye protection to avoid eye contact. Where there is potential for eye contact have eye flushing equipment available. Safety glasses with side-shields.

Skin protection Wear protective gloves/clothing. Socks and footwear.

Respiratory protection Where airborne exposure is likely, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. If exposures cannot be kept at a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure, use an approved full face positive-pressure, self-contained breathing apparatus. Respiratory protection programs must comply with 29 CFR 1910.134.

General hygiene considerations

Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state	powder	Odor	odorless
appearance	white light brown		
color	No information available		

<u>Property</u>	<u>VALUES</u>	<u>Remarks/ • Method</u>
pH	No information available	
Melting point/freezing point	No information available	
Boiling Point/Range	No information available	
Flash Point	No information available	
Evaporation Rate	No information available	
flammability (solid, gas)	No information available	
Flammability limit in air		
Upper Flammability Limit	No information available	
Lower Flammability Limit	No information available	
vapor pressure	No information available	
Vapor Density	No information available	
Specific gravity	No information available	
Water solubility	No information available	
Solubility in Other Solvents	No information available	

Partition coefficient: n-octanol/water	No information available
Autoignition temperature	No information available
decomposition temperature	No information available
Viscosity, kinematic	No information available
Dynamic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

OTHER INFORMATION

Softening point	No information available
molecular weight	No information available
VOC Content	No information available
density	No information available
Bulk density	No information available

10. Stability and Reactivity**Reactivity**

no data available

Chemical stability

Stable under normal conditions. Hazardous polymerisation does not occur.

Possibility of hazardous reactions

None under normal processing.

Hazardous polymerization Hazardous polymerisation does not occur.**Conditions to avoid**

Keep away from children.

incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

Oxides of sulfur.

11. Toxicological Information**Information on Likely Routes of Exposure****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.

Inhalation Harmful by inhalation.**Eye contact** Causes irreversible eye damage.**Skin contact** May be harmful if absorbed through the skin.**Ingestion** HARMFUL IF SWALLOWED.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Zinc, bis(dimethylcarbamodithioaot-kappa S, kappaS)-(T-4) 137-30-4	= 267 mg/kg (Rat)	> 2 g/kg (Rabbit)	= 81 mg/m ³ (Rat) 4 h

Information on Toxicological Effects**Symptoms** No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

sensitization No information available.
Mutagenic effects No information available.
Carcinogenicity The information below indicates whether any agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Zinc, bis(dimethylcarbamo-dithioaot-kappaS, kappaS)-(T-4) 137-30-4	-	Group 3		-

Reproductive effects Not Available.
STOT - Single Exposure No information available.
STOT - repeated exposure No information available.
Chronic toxicity Avoid repeated exposure.
Aspiration hazard No information available.

Numerical Measures of Toxicity - Product information

The following values are calculated based on chapter 3.1 of the GHS document .

LD50 Oral 1889 mg/kg (rat)
LD50 Dermal > 5000 mg/kg (rat)
LC50 Inhalation: Inhalation LC50 < 0.53 mg/l

12. Ecological Information

Marine Pollutant.

ecotoxicity

Zirm 76 DF :
 Highly toxic to Daphnia magna 48 hr LC50 0.048 mg/L
 Bluegill sunfish 96 hr LC50 0.0097 mg/L
 Moderatelt oxic to Rainbow trout 96 hr LC50 1.7 mg/L
 Bobwhite quail LC50 97 mg/kg
 Honeybees LC50 100 ug/bee

3.6% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence/Degradability

No information available.

Bioaccumulation/ Accumulation

Bioaccumulative potential.

Chemical name	Log Pow
Zinc, bis(dimethylcarbamo-dithioaot-kappaS, kappaS)-(T-4) 137-30-4	1.086

Other Adverse Effects

No information available

13. Disposal Considerations

Waste Treatment Methods

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 Refer to product label.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Zinc, bis(dimethylcarbamodithioaot -kappaS, kappaS)-(T-4)	P205	Included in waste stream: K161		

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Zinc, bis(dimethylcarbamodithioaot -kappaS, kappaS)-(T-4)		P205		

14. Transport Information

DOT

UN-No 3077
Proper shipping name Environmentally hazardous substances, solid, n.o.s (Ziram)
Hazard class 9
Packing group PG III
Reportable Quantity (RQ): 10 lbs
Marine Pollutant Marine Pollutant.

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
Description Marine Pollutant

IMDG/IMO

UN-No 3077
Proper shipping name Environmentally hazardous substances, solid, n.o.s (Ziram)
Hazard class 9
Packing group PG III
EmS No. F-A, S-F
Marine Pollutant Yes

15. Regulatory Information

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

signal word DANGER!

Ventilation Control 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.

Corrosive. Causes irreversible eye damage. May be fatal if inhaled. Harmful if swallowed or absorbed through the skin. Toxic to fish and aquatic invertebrates.

International Inventories

USINV	Not determined
DSL/NDSL	Not determined
EINECS/ ELINCS	Does not comply
ENCS	Does not comply
China	Does not comply
KECL	Complies
PICCS	Does not comply
AICS	Complies
TSCA	Does not comply

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or 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

Acute health hazard	yes
Chronic health hazard	yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	yes

Chemical name	RQ	CERCLA EHS RQs	RQ
Zinc, bis(dimethylcarbamo θ o θ -kappa S, kappaS)-(T-4) 137-30-4	10 lb		RQ 10 lb final RQ RQ 4.54 kg final RQ

CERCLA

Component	RQ
Zinc, bis(dimethylcarbamo θ o θ -kappaS, kappaS)-(T-4) 137-30-4 (76)	10 lb

SARA Product RQ 0

RCRA

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

Pesticide Information

State Regulations

State Right-to-Know

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Zinc, bis(dimethylcarbamo-dithioaot- kappaS, kappaS)-(T-4)	X	X			

International regulations

U.S. EPA Label information

EPA Pesticide registration number 70506-173

16. Other Information

NFPA **HEALTH** 2 **flammability** 0 **Instability** 0 **Physical hazard** -

Preparation Date 10-May-2015

Revision date 10-May-2015

Revision Summary

Update to GHS format

Disclaimer

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return product at once, unopened, and the purchase price will be refunded. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. harmless from any claims relating to such factors. To the extent consistent with applicable law, United Phosphorus Inc. makes no warranties or merchantability or of fitness for a particular purpose nor any other express or implied warranty except as stated on this label. To the extent consistent with applicable law, United Phosphorus Inc. shall not be liable for any incidental, consequential, indirect, or special damages resulting from the use or handling of this product and THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS INC. FOR ANY AND ALL CLAIMS, LOSSES, INJURIES, OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UNITED PHOSPHORUS, INC. THE REPLACEMENT OF THE PRODUCT. United Phosphorus, Inc., offers this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of United Phosphorus, Inc.

End of MSDS