



Safety Data Sheet

Preparation Date 10-May-2015

Revision date 03-Jan-2019

Revision Number: 4

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

Product identifier

Product Description: ZIRAM 76DF

Other means of identification

Product code 12-140
UN/ID no. UN3077
Registration number(s) 70506-173

Recommended use of the chemical and restrictions on use

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

Details of the Supplier of the Safety Data Sheet

Supplier Address

UPL NA 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-%
Zinc, bis(dimethylcarbamo-dithioaot-kappaS, kappaS)-(T-4)	137-30-4	76

If CAS number is "proprietary", the specific chemical identity and percentage 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 a 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 data 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 data 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/protective clothing and eye/face protection. Avoid contact with skin and 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		
Appearance	white light brown	Odor	odorless
color	No information available		

Property

VALUES

Remarks/ • Method

pH	No information available	
Melting point/freezing point	no data 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 data 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
Liquid 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.
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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.

Information on Toxicological Effects

Symptoms	No information available.
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Mutagenic effects no data 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 ^o dithioa ^o t-kappaS, kappaS)-(T-4) 137-30-4	-	Group 3		-

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

Numerical Measures of Toxicity - Product information

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

Persistence/Degradability

no data available.

Bioaccumulation/ Accumulation

Bioaccumulative potential.

Chemical name	Log Pow
Zinc, bis(dimethylcarbamo ^o dithioa ^o t-kappaS, kappaS)-(T-4) 137-30-4	1.086

Other Adverse Effects

no data 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 - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Zinc, bis(dimethylcarbamodithioat -kappaS, kappaS)-(T-4)		P205		

14. Transport Information

DOT

UN/ID no. UN3077
Proper shipping name Environmentally hazardous substances, solid, n.o.s (Ziram)
Hazard class 9
Packing group PG III
Reportable Quantity (RQ): 10 lbs
IMDG - Marine Pollutant Marine Pollutant.

ICAO

UN/ID no. UN3077
Proper shipping name Environmentally hazardous substance, solid, n.o.s (Ziram)
Hazard class 9
Packing group PG III
Description IMDG - Marine Pollutant

IATA

UN/ID no. UN3077
Proper shipping name Environmentally hazardous substances, solid, n.o.s (Ziram)
Hazard class 9
Packing group PG III
Description IMDG - Marine Pollutant

IMDG

UN/ID no. UN3077
Proper shipping name Environmentally hazardous substances, solid, n.o.s (Ziram)
Hazard class 9
Packing group PG III
EmS No. F-A, S-F
Environmental hazards 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 present

DSL/NDSL	Present
EINECS/ ELINCS	Not Present
ENCS	Not Present
China	Not Present
KECL	Present
PICCS	Not Present
AICS	Present
TSCA	Not Present

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 Title 40 of the Code of Federal Regulations, Part 372:

CERCLA

Not applicable

Chemical name	RQ	CERCLA EHS RQs	RQ
Zinc, bis(dimethylcarbamo-dithioaot-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-dithioaot-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-dithioaot-kappaS, kappaS)-(T-4) 137-30-4 (76)		P205	

Pesticide Information

State Regulations

State Right-to-Know

Not applicable

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 03-Jan-2019

Revision Summary

Update logo Update section 1 Update Section 16***

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End of SDS