



Safety Data Sheet

United Phosphorus, Inc.

Preparation Date 27-Apr-2015

Revision date 20-Nov-2018

Revision Number: 4

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

Product identifier

Product Description: Elixir

Other means of identification

Product code RD-ELIX
UN-No UN3077
Registration number(s) 70506-298

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

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 - Inhalation (Gases)	Category 2
Acute toxicity - Inhalation (Vapors)	Category 2
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Carcinogenicity	Category 2
Reproductive Toxicity	Category 2

Label elements

EMERGENCY OVERVIEW

DANGER

Hazard Statements

Fatal if inhaled
Causes serious eye damage
May cause an allergic skin reaction
Suspected of causing cancer
Suspected of damaging fertility or the unborn child

**Appearance** yellow-green**Physical state** solid granular**Odor** Woody**Precautionary Statements - Prevention**

Do not handle until all safety precautions have been read and understood

Wear cold insulating gloves/face shield/eye protection

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

Contaminated work clothing should not be allowed out of the workplace

Wear protective gloves

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

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

Precautionary Statements - Storage

Store locked up

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

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

3. Composition/information on Ingredients

Chemical name	CAS No	Weight-%
Mancozeb	8018-01-7	62.5
Chlorothalonil	1897-45-6	12.5

*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

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	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	Call a physician or poison control center immediately. Have person sip a glass of water if able to swallow. Clean mouth with water. Never give anything by mouth to an unconscious person.

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 No information available.

5. Fire-fighting measures

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media no data available.

Specific hazards arising from the chemical

No information available.

Hazardous combustion products Elevated temperatures can cause decomposition to potentially toxic gases.

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 Avoid contact with skin and eyes. Provide adequate ventilation. Use personal protective equipment.

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 Avoid breathing dust. Avoid contact with skin and eyes. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities

Storage Keep tightly closed in a dry and cool place. Keep out of the reach of children.

incompatible materials No information available.

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

Where there is potential for eye contact have eye flushing equipment available. Use eye protection to avoid eye contact.

Skin protection

Socks and footwear. Wear protective gloves/clothing.

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. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state	solid granular	Odor	Woody
Appearance	yellow-green		
color	No information available		

<u>Property</u>	<u>VALUES</u>	<u>Remarks/ • Method</u>
pH	7	
Melting point/freezing point	no data available	
Boiling Point/Range	No information available	
Flash Point		
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 recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Excessive heat and open flame.

incompatible materials

No information available.

Hazardous decomposition products

no data available.

11. Toxicological Information

Information on Likely Routes of Exposure

Inhalation	May be harmful if inhaled.
Eye contact	Causes substantial but temporary eye injury.
Skin contact	May cause irritation.
Ingestion	MAY BE HARMFUL IF SWALLOWED.

Component Information

The following relates to the active ingredient(s):
 Mancozeb:
 Acute oral LD50 (rat) = >5.0 g/kg
 Acute dermal LD50 (rabbit) = >2.0 g/kg
 Acute Inalation LC50 (rat) = >5.2 mg/L - 4 hr

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 data available.
Carcinogenicity	<p>Mancozeb: The effects in animals from repeated high inhalation dose of mancozeb dust equivalent to 150 -250 times the AEL include reduced body weight, inflammation of the lungs, and abnormal thyroid function.</p> <p>Toxic effects in animals from repeated ingestion of hgih doses of Mancozeb include reduced body weight and thyroid effects. In a different study, repeated dosing caused toxic and neuopathological effects in male and female rats which included compound-related mortality, decreased body weight, impaired hind limb motor activity and histopathological</p>

evidence of nerve damage. The no-observable effect level was 125 ppm.

Increased incidences of thyroid tumors and ocular lesions were observed in rats administered 750 ppm (equivalent to approximately 35 mg/kg/day) of mancozeb in their diet for two years. Mancozeb is considered to show weak carcinogenic activity. Tests in some animals indicate that mancozeb may produce embryo and fetal toxicity, but only at maternally toxic doses. Multi-generation studies in animals demonstrate no reproductive toxicity. Chlorothalonil:

No evidence of carcinogenicity in dogs after administration for up to one year. Squamous cell adenomas were observed in the forestomach of both rats and mice. This observation is not relevant to humans as humans have no anatomical equivalent of a forestomach.

Comprehensive dietary and worker exposure studies have shown exposure levels for humans to be well below these threshold levels - in addition surveillance of chlorothalonil plant workers for many years has not demonstrated any increase in oncogenic potential to humans.

Chemical name	ACGIH	IARC	NTP	OSHA
Chlorothalonil 1897-45-6	-	Group 2B		X

Reproductive effects	Not Available.
STOT - Single Exposure	no data available.
STOT - Repeated Exposure	no data available.
Aspiration hazard	No information available.

Numerical Measures of Toxicity - No information available

12. Ecological Information

ecotoxicity

Mancozeb = Rainbow trout = 0.73 mg/L 96 hr
 Fathead minnow 0.57 mg/L 96 hr
 Bluegill sunfish = 0.84 mg/L 96 hr
 Freshwater algae = 0.43 mg/L 72 hr
 Chlorothalonil =
 Bee LC50/EC50 = >181 ug/bee
 Waterflea LC50/EC50 = 0.069 ppm
 Trout LC50/EC50 = 0.04 ppm
 Bobwhite quail LC50/EC50 = >5.200 ppm

Persistence/Degradability

no data available.

Bioaccumulation/ Accumulation

Bioaccumulative potential.

Chemical name	Log Pow
Chlorothalonil 1897-45-6	2.9

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.

14. Transport Information

DOT When shipped domestically by highway in non-bulk containers this product can be shipped as not regulated.

UN-No
Proper shipping name
Hazard class
Packing group

When shipped in bulk, by vessel, or internationally use the IMDG shipping description:
UN3077
Environmentally hazardous substances, solid, n.o.s Mancozeb
9
PG III

TDG When shipped in Canada domestic highway non-bulk this product can be shipped as Not regulated as per TDG 1.45.1
In bulk - use IMDG description

ICAO

UN-No
Proper shipping name
Hazard class
Packing group
Description

UN3077
Environmentally hazardous substance, solid, n.o.s Mancozeb
9
PG III
Marine Pollutant

IATA

UN-No
Proper shipping name
Hazard class
Packing group
Description

UN3077
Environmentally hazardous substances, solid, n.o.s Mancozeb
9
PG III
Marine Pollutant

IMDG/IMO

UN-No
Proper shipping name
Hazard class
Packing group
EmS No.
Marine Pollutant

UN3077
Environmentally hazardous substances, solid, n.o.s (Mancozeb)
9
PG III
F-A, S-F
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 CAUTION

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.

Keep out of Reach of Children. Harmful if inhaled or absorbed through skin. Harmful if swallowed. Causes moderate eye irritation.

International Inventories

USINV	Not present
DSL/NDSL	Not present
EINECS/ ELINCS	Not Present
ENCS	Not Present
China	Not Present
KECL	Not Present
PICCS	Not Present
AICS	Not 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**

Y

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

CERCLA

Not applicable

CERCLA**RCRA****Pesticide Information****State Regulations**

Component	CAS No	CATEGORY
Mancozeb 8018-01-7 (62.5)	8018-01-7	Carcinogen
Chlorothalonil 1897-45-6 (12.5)	1897-45-6	Carcinogen

Prop 65 Pictogram**Prop 65 Warning Statement
California Proposition 65****WARNING!*****

This product can expose you to chemicals including those listed below, which is [are] known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov***

Component	California Prop. 65	Non-additive, corrosive chemical type
Mancozeb 8018-01-7 (62.5)	Carcinogen	
Chlorothalonil 1897-45-6 (12.5)	Carcinogen	

State Right-to-Know

Not applicable

International regulations**U.S. EPA Label information**

EPA Pesticide registration number 70506-298

16. Other Information**NFPA**

HEALTH 2

flammability 0

Instability 0

Physical hazard -

Preparation Date

27-Apr-2015

Revision date

20-Nov-2018

Revision Summary

Add Prop 65 statement***

Disclaimer

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End of SDS