Material Safety Data Sheet

United Phosphorus, Inc.

NFPA	PPE
	 

Issued Date 18-Sep-2008 **Revision Date** 04-Jan-2011 **Revision Number:** 3

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)

Company Information	Contact Information	Phone Number	Available Hrs
UPI	Customer Service	1-800-438-6071	8:00 am to 5:00 pm EST
	R&D Technical Service	610-878-6100	8:00 am - 5:00 pm (EST)

Product Name TriCor 4F
EPA Reg # 70506-68
Recommended Use herbicide
Product Code 12U-145B

2. HAZARDS IDENTIFICATION

Emergency Overview

May cause eye and skin irritation
May cause irritation to the respiratory tract.
Harmful of swallowed or absorbed through skin.

CAUTION

Appearance off-white. **Physical State** Viscous. Liquid. **Odor** faint.

Potential Health Effects

Acute Effects

Based on single exposure animal studies, it is considered to be slightly irritating to eyes and skin. Overexposure to mist or vapor may cause slight irritation to the upper respiratory tract and eyes. Repeated or prolonged skin contact may cause mild irritation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients Name

Chemical Name	CAS-No	Weight %	OSHA PEL
Metribuzin technical	21087-64-9	41	5 mg/m³

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 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 artifical respiration.
Call a poison control center or doctor for further treatment advice.

Ingestion

Call a physician or Poison Control Center immediately
Have person sip a glass of water if able to swallow
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

5. FIRE-FIGHTING MEASURES

Flammable Explosive Properties

Flash Point
> 100°C / > 212°F

Autoignition Temperature
Not available

Flammability Limits in Air

Not available

Extnguishing Media

Water Dry chemical Carbon dioxide (CO2) Foam Sand

Fire/Explosion Hazard

Toxic vapors may be released in the event of fire.

Hazardous Combustion Products

Oxides of nitrogen, Oxides of carbon, hydrogen cyanide, Sulfur oxides.

NFPA **Health** 1 **Flammability** 1 **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 pertinenet environmental permits..

Methods for Clean-up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Handling Do not eat, drink or smoke when using this product. Avoid contact with skin and eyes. Ensure adequate ventilation. Wear personal protective equipment.

Storage Store in an area where cross-contamination with pesticides, fertilizers, food or feed could not occur. . Store in cool/well-ventilated place. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL
Metribuzin technical	5 mg/m³	5 mg/m³

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

Skin Protection Wear protective gloves/clothing. Chemical resistant gloves. waterproof gloves. 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. Wash hands and face before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	off-white	**Odor**	faint
Physical State	Viscous Liquid	**pH**	(@20C)7.37
Boiling Point/Range	Not available	**Melting Point/Range**	Not available
Specific Gravity	1.16 g/cm3 20 c	**Solubility**	Not available
Evaporation Rate	Not available	**Vapor Pressure**	Not available
Vapor Density	Not available	**VOC Content**	Not available
Viscosity	456 cP @ 20 C	**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	Sustained temperatures above 100 F.
Incompatible Materials	ketones. Alkaline. aldehydes.
Hazardous Decomposition Products	Oxides of sulfur. Carbon oxides. Amines. Mercaptans.
Possibility of Hazardous Polymerization	None under normal processing

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information

Metri 4F:
Acute oral LD50 (rat) = 1871 mg/kg
Acute dermal LD50 (rat) = >2,000 mg/kg
Acute inhalation LC50 (rat) = >1.881 mg/L 4 hr
Skin irritation (rabbit) = Not an irritant
Eye irritation (rabbit) = Not an irritant
Skin sensitization (guinea pig) = Not a sensitizer

Chronic Toxicity

The information given below refer to the active ingredient(s) for this product:.

Carcinogenicity

Metribuzin carcinogenicity - Metribuzin was investigated for carcinogenicity in chronic feeding studies using rats and mice at maximum levels of 900 and 3200 ppm, respectively. There was no evidence of carcinogenic potential observed in either species.

Mutagenicity - Metribuzin is not gentoxic

Developmental toxicity - In rat teratology studies, metribuzin was administered orally during gestation at doses of 25, 70, or 200 mg/kg. Maternal toxic effects were observed at all doses. At 200 mg/kg fetotoxic effects observed included reduced median placental weights, reduced median fetal weights, and increased incidence of delayed ossification.
Teratogenic effects were not observed at any of the doses tested.
The NOEL's for maternal and developmental toxicity were less than 25 and 70 mg/kg, respectively. When rabbits were administered metribuzin by oral gavage during gestation at doses of 10, 30, or 85 mg/kg, there was no evidence of any developmental effects. The NOEL's for maternal and developmental toxicity were 30 and 85 mg/kg respectively.

Reproduction - In a rat reproduction study, metribuzin was administered for 2 generations at dietary concentrations of 30, 150 or 750 ppm. Offspring at the high dose exhibited reduced body weight gains starting at day 14 lactation, an age correlating with the consumption of treated diets. The NOEL's for materials and reproductive toxicity were 30 and 750 ppm, respectively. .

Metribuzin - Dogs were administered metribuzin for 2 years at dietary concentrations of 25, 100 and 1500 ppm. Effects observed at high concentration included decreases in body weight and food consumption, anemia, liver effects, kidney effects, testicular effects and mortality. The NOEL was 100 ppm.

In 2 year dietary studies with rats, concentrations ranging from 25 to 900 ppm were adminstered. At concentrations of 300 ppm and greater, effects observed included decreased body weight gains, increased thyroid weights and changes in thyroid hormones. At 900 ppm, there was an increased incidence of follicular hyperplasia seen in the thyroid. The systemic NOEL was 30 ppm. .

12. ECOLOGICAL INFORMATION

Ecotoxicity

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not clean equipment or dispose of equipment washwaters in a manner that will contaminate water resources or arable land. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water be cleaning equipment or disposal of waste. .

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. .

(For containers less than 5 gallons) . Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application requipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. The offer for recycling if avilable or puncture and dipose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. .
[For containers larger than 5 gallons] Triple rinse or pressure rinse as follows:
Triple rinse: Empty the remaining contents into application equipment or a mix tank. Fill container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll back and forth, ensuring at least one complete revolution, for 30 seconds. Stand container on its end and tip back and forth several times. Empty rinsate into application equipment ot a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.
Pressure rinse: Empty remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over appication equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after flow begins to drip.
The offfer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities. .
Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the cotnainer, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. .

14. TRANSPORT INFORMATION

DOT Not regulated

ICAO Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

Metribuzin technical

EINECS/ELINCS	Listed
CHINA	Listed
KECL	Listed

USA

Federal Regulations

SARA 313
Y

Chemical Name	CAS-No	Weight %
Metribuzin technical	21087-64-9	41

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
RCRA

Pesticide Information

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
Metribuzin technical	Listed.	Substance no. 1302 Listed.	Listed.	Listed.	Listed.

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 04-Jan-2011

Revision Summary
Update section 13 Update section 8

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End of MSDS