Material Safety Data Sheet

United Phosphorus, Inc.

NFPA	PPE
	  

Issued Date 27-Apr-2007 **Revision Date** 23-Dec-2010 **Revision Number:** 6

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 PERM-UP 3.2 EC INSECTICIDE
EPA Reg # 70506-9
Recommended Use insecticide
Product Code 12U-119

2. HAZARDS IDENTIFICATION

Emergency Overview

Irritating to eyes
Irritating to skin
May be harmful if swallowed

DANGER! CAUTION

Appearance Amber. **Physical State** Liquid. **Odor** Slight. Odor.

Potential Health Effects

- Inhalation
- Skin contact

Eyes Irritating to eyes.

Skin May cause skin irritation. Irritating to skin. Dermatitis and superficial skin damamge can result from repeated or prolonged contact with very dilute solutions. . May produce hypersenitivity to sound and touch, tremors and convulsions may result from prolonged exposure..

Inhalation May cause irritation of respiratory tract.

Ingestion May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients Name

Chemical Name	CAS-No	Weight %	OSHA PEL
Triacetin	102-76-1	20-40	N/A
Permethrin technical	52645-53-1	36.8	N/A
Varsol	8052-41-3	26	525 mg/m³ 100 ppm
Ethyl benzene	100-41-4	<0.1	435 mg/m³ 100 ppm
1,2,4-trimethyl benzene	95-63-6	<4	125 mg/m³ 25 ppm

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 Never give anything by mouth to an unconscious person Do not induce vomiting unless told to do so by a poison control center or doctor
Notes to Physician	Reversible skin sensations (parethesia) may occur and ordinary skin salves have been found useful in reducing discomfort. Contains aromatic hydrocarbons that may produce a severe pneumonitis if aspirated during vomiting. Consideration should be given to gastric lavagewith an endotracheal tube in place. Treatment is otherwise controlled by removal of exposure followed by symptomatic and supportive care.

5. FIRE-FIGHTING MEASURES

Flammable Explosive Properties

Flash Point	44°C / 111°F
Autoignition Temperature	Not available
Flammability Limits in Air	Not available
Extnguishing Media	Carbon dioxide (CO2), Foam Water spray Dry powder.
Fire/Explosion Hazard	Combustible material NOTE: Check that all equipment is properly grounded and installed to satisfy electrical classification requirements. As with any dry material, pouring this material or allowing it to free-fall or be conveyed through chutes or pipes can accumulate and generate electrostatic sparks, potentially causing ignition of the material itself, or any flammable materials which may come into contact with the material or its container. Keep product and empty container away from heat and sources of ignition
Hazardous Combustion Products	Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by heat, pilot lights, and other flames and ignition sources at locations distant from material handling point. .

NFPA **Health** 1 **Flammability** 2 **Instability** 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid contact with the skin and the eyes. Remove all sources of ignition. Take precautionary measures against static discharges.
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	Ground and bond containers when transferring material. Remove all ignition sources. Use non-sparking tools .

7. HANDLING AND STORAGE

Handling

Remove all sources of ignition. Keep away from open flames, hot surfaces and sources of ignition. Check that all equipment is properly bonded and grounded.. Do not cut grind or weld on or near containers - explosion hazard. . Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Use spark resistant tools. Wear personal protective equipment. Wash thoroughly after handling. .

Storage

Keep away from open flames, hot surfaces and sources of ignition. Keep in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL
Varsol	100 ppm	525 mg/m³ 100 ppm
Ethyl benzene	100 ppm	435 mg/m³ 100 ppm
1,2,4-trimethyl benzene	25 ppm	125 mg/m³ 25 ppm

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

Tightly fitting safety goggles. Use eye protection to avoid eye contact. . Avoid contact with eyes.

Skin Protection

Coveralls. Long sleeved clothing. Long pants. Chemical resistant gloves. Chemical resistant footwear plus socks.

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

Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. For environmental protection remove and wash all contaminated protective equipment before re-use. Remove and wash contaminated clothing before re-use. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Amber	**Odor**	Slight Odor
Physical State	Liquid	**pH**	approx.4.9
Boiling Point/Range	Not available	**Melting Point/Range**	Not available
Specific Gravity	1.039 @20 C	**Solubility**	Emulsifies
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	8.65 lb/gal	**Percent Solids**	Not available
Percent Volatiles	Not available		

10. STABILITY AND REACTIVITY

Stability	Fire Hazard Stable under recommended storage conditions
Conditions to Avoid	Keep away from open flames, hot surfaces and sources of ignition.
Incompatible Materials	No materials to be especially mentioned
Hazardous Decomposition Products	Hydrogen chloride. Carbon oxides. hydrogen cyanide. chlorine.
Possibility of Hazardous Polymerization	None under normal processing

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information

Perm-Up 3.2

Acute oral LD50	**1030 mg/kg (rat)**
Acute dermal LD50	**>2,000 mg.kg (rabbit)**
Acute inhalation LC50	**>25.7 mg/L/4hr(rat)**
Eye irritation	**Moderately irritating**
Skin irritation	**Moderately irritating**
Dermal sensitization	**Not a sensitizer**

Skin sensitizations are reversible and usually subside within 12 hours. Permethrin contact with skin has rarely produced skin sensitizations such as numbing, burning, and tingling. Large doses of permethrin to laboratory animals have produced symptoms such as dirrhea, salivation, tremors, intermittent convulsions. Overexposure to animals via inhalation has also produced hyperactivity and hypersensitivity.

Permethrin did not cause resproductive toxicity or teratogenicity. Analysis of chronic feeding studies in both mice and rats with permethrin resulted in the conclusion that permethrin's potential for induction of oncogenicity in experimental animals is low and the likelihood of oncogenic effects in human is nonexistent or extremely low. Long term feeding studies in animals resulted in increased liver and kidney weights, induction of the liver microsomal drug metabolizing enzyme system, and histopathological changes in the liver and lungs. An overall absence of genotoxicity has been demonstrated in mutagenicity testing with permethrin.

Chronic Toxicity

There are no known carcinogenic chemicals in this product.

Carcinogenicity

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethyl benzene	A3			

12. ECOLOGICAL INFORMATION

Ecotoxicity

Permethrin
When applied at agricultural use rates, permethrin has a moderate rate of degradation in soil. At termicidal use rates, permethrin degrades as a slower rate which is governed by soil characteristics such as soil type, microbial population, concentration in soil, and aerobis conditions of the soils. Due to its high affinity for organic matter (Koc=86,000), there is little potential for movement in soil or entry into ground water. Permethrin has a Log Pow of 6.1, but a low potential to bioconcentrate (BCF= 500) due to the ease which it is metabolized.

Extremely toxic to fish LC50 = 0.05 ug/L to 315 ug/l
Extremely toxic to aquatic arthopods LC50 =0.02 ug/L to 7.6 ug/L

Marine species are often more sensitive than freshwater species. Bacteria, algae, mollusks and amphibians are much more tolerant of permethrin than the fish and arthropods. Care should be taken to avoid contamination of the aquatic environment. Permethrin is slightly toxic to birds and oral LD50 values are greater than 3,600 mg/kg. Longer dietary studies showeed that concentrations of up to 500ppm in the diet had no effect on bird reproduction.

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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. . Clean container promptly after emptying. .
[For containers smaller than 5 gallons] Triple rinse as follows: Empty the contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 3/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or 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. .
[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. .

14. TRANSPORT INFORMATION

DOT

When shipped domestically IN NON-BULK packages by highway this material is classed as a combustible liquid and as such is not subject to the DOT regulations per 49 CFR 173.150(f) (2)

Proper Shipping Name	Flammable liquid, n.o.s (hydrocarbon solvent, 1,2,4-trimethylbenzene)
Hazard Class	3
UN-No	UN1993
Packing Group	PG III

ICAO

UN-No	UN1993
Proper Shipping Name	Flammable liquid, n.o.s (hydrocarbon solvent, 1,2,4-trimethylbenzene)
Hazard Class	3
Packing Group	PG III

IATA

UN-No	UN1993
Proper Shipping Name	Flammable liquid, n.o.s (hydrocarbon solvent, 1,2,4-trimethylbenzene)
Hazard Class	3
Packing Group	PG III
ERG Code	3 L

IMDG/IMO

Proper Shipping Name	Flammable liquid, n.o.s (hydrocarbon solvent, 1,2,4-trimethylbenzene)
Hazard Class	3
UN-No	UN1993
Packing Group	PG III

15. REGULATORY INFORMATION

International Inventories

Triacetin

DSL	Listed
EINECS/ELINCS	Listed
ENCS	Listed
CHINA	Listed
KECL	Listed

Permethrin technical

EINECS/ELINCS	Listed
ENCS	Listed
CHINA	Listed
KECL	Listed

Varsol

DSL	Listed
EINECS/ELINCS	Listed
ENCS	Listed
CHINA	Listed
KECL	Listed

Triacetin
Ethyl benzene

DSL	Listed
EINECS/ELINCS	Listed
ENCS	Listed
CHINA	Listed
KECL	Listed

1,2,4-trimethyl benzene

DSL	Listed
EINECS/ELINCS	Listed
ENCS	Listed
CHINA	Listed
KECL	Listed

USA

Federal Regulations

SARA 313
SARA 313

Chemical Name	CAS-No	Weight %
Permethrin technical	52645-53-1	36.8
Ethyl benzene	100-41-4	<0.1
1,2,4-trimethyl benzene	95-63-6	<4

SARA 311/312 Hazardous Categorization

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

Clean Water Act

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ethyl benzene	1000 lbs	Listed.		Listed.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product contains the following HAPs:

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Ethyl benzene	100-41-4	<0.1	Listed.	Listed.		

CERCLA

Chemical Name	RQ
Ethyl benzene	Listed.

RCRA

Chemical Name	RCRA - D Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Ethyl benzene	D001		

Pesticide Information

State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	Category	California Prop. 65
Ethyl benzene	100-41-4		Listed. Listed: June 11, 2004 Carcinogenic. 54 ug/day Inhalation 41 ug/day Oral

State Right-to-Know

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Permethrin technical	Listed.				
Varsol	Listed.	Substance no. 1736 Listed.	Listed.		Listed.
Ethyl benzene	Listed.	Substance no. 0851 Listed. Substance no. 2422 Listed. Substance no. 2423 Listed. Substance no. 2425 Listed. Substance no. 2426 Listed. Substance no. 2427 Listed. Substance no. 2428 Listed. Substance no. 2429 Listed. Substance no. 2430 Listed. Substance no. 0851 Special hazard.	Listed.	Listed.	Listed.
1,2,4-trimethyl benzene	Listed.	Substance no. 1929 Listed. Substance no. 2716 Listed.	Listed.	Listed.	Listed.

International Regulations

Mexico - Grade Mexico - Grade

Chemical Name	Category	Carcinogen Status	Exposure Limits
Varsol			523 mg/m³
Ethyl benzene			435 mg/m³
1,2,4-trimethyl benzene			125 mg/m³

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

Chemical Name	NPRI
Ethyl benzene	X
1,2,4-trimethyl benzene	X

16. OTHER INFORMATION

Revision Date 23-Dec-2010

Revision Summary
Update section 13 Update section 8

UPI, Inc. believes that the information and recommendations container herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with other materials or in any process. Further, since the conditions and methods of use are beyond the control of UPI, Inc. UPI, Inc. expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

End of MSDS