Material Safety Data Sheet

United Phosphorus, Inc.

NFPA	PPE

Issued Date 24-Jul-2007 **Revision Date** 03-Jan-2011 **Revision Number:** 7

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 Tengard SFR One Shot
EPA Reg # 70506-6 / PMRA no 29886
Recommended Use insecticide termiticide
Product Code 12U-131

2. HAZARDS IDENTIFICATION

Emergency Overview

May cause eye and skin irritation
Harmful by inhalation, in contact with skin and if swallowed

CAUTION

Appearance Amber. **Physical State** Liquid. **Odor** faint. Mild. petroleum.

Potential Health Effects

- Inhalation
- Skin contact

Skin Skin contact may produce skin sensations such as numbing, burning, or tingling. These sensations are reversible within 12 - 24 hours of onset. .

Inhalation Inhalation of solvent vapors may cause headache, fatigue and intermittent episodes of inebriation that resolve after removal from exposure. .

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients Name

Chemical Name	CAS-No	Weight %	OSHA PEL
Triacetin	102-76-1	20-35	N/A
Permethrin technical	52645-53-1	36.8	N/A
Hydrocarbon solvent		>15	525 mg/m³ 100 ppm

4. FIRST AID MEASURES

Eye Contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician
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

Treat symptomatically
Treatment should include monitoring for the development of hypersensitivity reactions with respiratory distress.
For paresthesia, Vitamin E topical application is highly effective.

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	Foam, Carbon dioxide (CO2) Dry chemical.
Fire/Explosion Hazard	Heated material can form flammable and explosive vapors with air. Contain run-off from fire. Keep product and empty container away from heat and sources of ignition Vapors are heavier than air and may travel along 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.
Hazardous Combustion Products	Carbon dioxide (CO2), chlorine, Hydrogen chloride.

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

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Remove all sources of ignition. Use personal protective equipment. Avoid contact with the skin and the eyes. Ensure adequate ventilation.
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.. Do not allow material to contaminate ground water system.
Methods for Clean-up	Remove all ignition sources. Use non-sparking tools . 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. Ground and bond containers when transferring material.

7. HANDLING AND STORAGE

Handling	Do not eat, drink or smoke when using this product. Remove all sources of ignition. Avoid contact with skin and eyes. Keep away from open flames, hot surfaces and sources of ignition. Check that all equipment is properly bonded and grounded.. Use spark resistant tools. Remove and wash contaminated clothing before re-use.
Storage	Keep away from open flames, hot surfaces and sources of ignition. Store in an area where cross-contamination with pesticides, fertilizers, food or feed could not occur. . Store at temperatures above 40 F (5 C). If crystals form, warm to room temperature 70 F(21 C) by room heating only for 24-48 hours, and shake occasionally until crystals dissolve and product appears uniform. Do not use external source of heat for warming containers. .

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL
Hydrocarbon solvent	100 ppm	525 mg/m³ 100 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. .

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. . Tightly fitting safety goggles.

Skin Protection

Impervious gloves.

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. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection. 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	Amber	**Odor**	faint Mild petroleum
Physical State	Liquid	**pH**	(6% in water)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**	1.039 @ 20 C
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

Heat, flames and sparks.

Incompatible Materials

No information available.

Hazardous Decomposition Products

Carbon monoxide. Carbon dioxide (CO2). hydrogen cyanide. chlorine. Hydrogen chloride.

Possibility of Hazardous Polymerization

None under normal processing

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

Permethrin - has low mammalian toxicity and virtually no allergic side effects and is not a skin or eye irritant. However, prolonged exposure might result in parathesia (tingling sensation), which is reversible within 12 hours. Exposure to permethrin is via dermal contact and inhalation. In repeat patch tests in humans, dermal applications of permethrin at 1% for up to 9 days did not result in irritation or sensitization. The clinical manifestations of inhalation exposure are confined to the upper respiratory tract and include rhinitis, sneezing, cough, and scratchy throat.
Triacetin - is not an irritant or a sensitizer in a clinical maximization study involving humans and only very mild reactions were seen in a test using 50% dilution. While it appears to be innocuous when swallowed, inhaled or in contact with the skin, it may cause slight irritation to sensitive individuals. The dermal LD50 of triacetin in rabbits is >5 g/kg (non-toxic). Triacetin was non-toxic when administered via inhalation or parenterally or in subchronic studies administered via feed or inhalation.
Hydrocarbon solvent (Stoddard) - Exposure via inhalation or dermal contact. Humans exposed for 30 minutes to up to 2,400 mg/m^3 of completely vaporized Stoodard solvent had no dose related changes in motor coordination and the exposure level of 2,400 mg/m^3 was considered as the no observed effect level. In a 15 minute period, eye irritation, characterized as a slight dryness, was reported in one of six volunteers at 150 ppm. At 470 ppm (2,700 mg.m3), ocular irritation was reported by all six volunteers. Exposure greater than 525 mg/m^3 have been associated with ocular and dermal irritation, defatting of the skin, and anusea. Acute effects from inhaling large concentrations of Stoddard solvent has been associated with headaches, fatigue, intermittent episodes of inebriation, and memory deficits that generally resolve on discontinuation of exposure. Ingestion of petroleum hydrocarbons are poorly absorbed from the gastrointestinal tract, and do not cause appreciable sysstemic toxicity by this route unless aspiration has occurred.

Chronic Toxicity

Carcinogenicity

Carcinogenicity .

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.

. Permethrin: This product is extremely toxic to fish, aquatic invertabrates, and honeybees. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other bodies of water unless in accordance with the requirements of a National Pollutant discharge Elimination system (NDPES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously motifying the local sewage treatment plant authority. For guidance, contact your State Water Board or the Regional Office of the Environmental Protection Agency.

FISH TOXICITY:
Rainbow trout LC50 (96 hr) 2.5 ug/L
Bluegill sunfish LC50 (95 HR) 1.8 ug/L

AVIAN TOXICITY
Mallard duck LD50 11,275 mg/kg b.w.
Japanese quail LD50 23,000 mg/kg b.w..

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method

Dispose of in accordance with all applicable federal, state, and local laws and regulations. .

Contaminated Packaging

Non refillable container. Do not reuse this container. . Clean container promptly after emptying. . Trple rinse (or equivalent) 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 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 container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. .

14. TRANSPORT INFORMATION

DOT

Not regulated as per 173.150(f) when shipped by highway in non-bulk (below 119 gallon) containers.

ICAO

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

IATA

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

IMDG/IMO

Proper Shipping Name	Flammable liquid, n.o.s (hydrocarbon)
Hazard Class	3
UN-No	UN1993
Packing Group	PG III
EmS No.	F-E, S-E

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

Hydrocarbon solvent

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

USA

Federal Regulations

SARA 313
Y

Chemical Name	CAS-No	Weight %
Permethrin technical	52645-53-1	36.8

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

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
Permethrin technical	Listed.				
Hydrocarbon solvent	Listed.	Substance no. 1736 Listed.	Listed.		Listed.

International Regulations

Mexico - Grade Mexico - Grade

Chemical Name	Category	Carcinogen Status	Exposure Limits
Hydrocarbon solvent			523 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

16. OTHER INFORMATION

Revision Date 03-Jan-2011

Revision Summary
Update section 13 Update section 2

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End of MSDS