



MATERIAL SAFETY DATA SHEET

United Phosphorus, Inc.

NFPA	PPE

Issued Date 24-Jul-2007

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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)		
<u>Company Information</u>	<u>Contact Information</u>	<u>Phone number</u>	<u>Available Hrs</u>
UPI	Customer Service R&D Technical Service	1-800-438-6071 610-878-6100	8:00 am to 5:00 pm EST 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 HARMFUL IF SWALLOWED Very toxic in contact with skin MAY BE HARMFUL IF SWALLOWED irritant corrosive May cause drowsiness and dizziness		
DANGER CAUTION WARNING appearance amber.	Physical state liquid.	Odor faint. Mild (bad translation). Petroleum.

Potential health effects

- Inhalation	Skin contact may produce skin sensations such as numbing, burning, or tingling. These sensations are reversible within 12 - 24 hours of onset. Very toxic in contact with skin. Inhalation of solvent vapors may cause headache, fatigue and intermittent episodes of inebriation that resolve after removal from exposure. MAY BE HARMFUL IF SWALLOWED.
- Skin Contact	
skin	
Inhalation	
Ingestion	

3. Composition/information on Ingredients

Ingredients Name

Component	CAS-No	Weight %	OSHA PEL
Triacetin 102-76-1 (20-35)	102-76-1	20-35	N/A
Permethrin technical 52645-53-1 (36.8)	52645-53-1	36.8	N/A
Hydrocarbon solvent (>15)	-	>15	TWA: 500 ppm TWA: 2900 mg/m ³ (vacated) TWA: 100 ppm (vacated) TWA: 525 mg/m ³

4. First aid measures

Eye contact	Immediate medical attention is not required Rinse thoroughly with plenty of water, also under the eyelids Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
Skin contact	If skin irritation persists, call a physician Immediate medical attention is not required Wash off immediately with plenty of water Call a physician immediately Wash off immediately with plenty of water for at least 15 minutes Remove and wash contaminated clothing before re-use
Inhalation	Immediate medical attention is not required Move to fresh air
Ingestion	Immediate medical attention is not required Rinse mouth Drink plenty of water If symptoms persist, call a physician Do not induce vomiting without medical advice Never give anything by mouth to an unconscious person Consult a physician
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 3	flammability 2	Instability 1

6. Accidental release measures

Personal Precautions	Provide adequate ventilation.
Environmental precautions	Prevent further leakage or spillage if safe to do so. No special environmental precautions required.
Methods for Clean-Up	Pick up and transfer to properly labelled containers. After cleaning, flush away traces with water.

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 in a dry place. Keep containers tightly closed in a cool, well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure guidelines

Chemical name	ACGIH TLV	OSHA PEL
Hydrocarbon solvent	TWA: 100 ppm	TWA: 500 ppm TWA: 2900 mg/m ³ (vacated) TWA: 100 ppm (vacated) TWA: 525 mg/m ³

Engineering controls Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/Face Protection	Tightly fitting safety goggles.
Skin protection	Impervious gloves.
Respiratory protection	Effective dust mask.

General hygiene considerations
General industrial hygiene practice.

9. Physical and Chemical Properties

appearance	amber	Odor	faint Mild (bad translation) Petroleum
Physical state	liquid	pH	(6% in water) 4.9
Boiling Point/Range	Not Available	Melting Point/Range	5.9 °C / 43 °F

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	Strong oxidizing agents
Hazardous decomposition products	Carbon oxides
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/m³ of completely vaporized Stoddard solvent had no dose related changes in motor coordination and the exposure level of 2,400 mg/m³ 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/m³ 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 systemic toxicity by this route unless aspiration has occurred.

Chronic toxicity

Carcinogenicity

The information below indicates whether any agency has listed any ingredient as a

carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Permethrin technical		Group 3		

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 arthropods 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	Can be incinerated, when in compliance with local regulations. Can be disposed as waste water, when in compliance with local regulations. Can be landfilled or incinerated, when in compliance with local regulations.
Contaminated packaging	Clean container with water. Empty containers should be taken for local recycling, recovery or waste disposal.

14. Transport Information

DOT

Proper shipping name	Flammable liquid, n.o.s (Hydrocarbon)
Hazard class	3
UN-No	UN1993
Packing group	PG III
Marine Pollutant	Y. (Permethrin). This product contains a chemical which is listed as a marine pollutant

according to DOT.

ICAO

UN-No UN1993
Proper shipping name Flammable liquid, n.o.s (hydrocarbon solvent)
Hazard class 3
Packing group PG III
Description Marine Pollutant (Permethrin)

IATA

UN-No UN1993
Proper shipping name Flammable liquid, n.o.s (hydrocarbon)
Hazard class 3
Packing group PG III
ERG Code 3L
Description Marine Pollutant (Permethrin)

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

TDG

Proper shipping name Flammable liquid, n.o.s (hydrocarbon)
Hazard class 3
UN-No UN1993
Packing group PG III

15. Regulatory Information

International Inventories

Chemical name	TSCA	DSL	NDSL	EINECS/ ELINCS	ENCS	China	KECL	AICS
Triacetin	Present	X		X	Present	X	Present	X
Permethrin technical				X	Present	X	Present	X
Hydrocarbon solvent	Present	X		X	Present	X	Present	X

USA

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:

Chemical name	CAS-No	Weight %	SARA 313 - Threshold Values
Permethrin technical	52645-53-1	36.8	1.0

SARA 311/312 Hazardous Categorization

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

Clean Water Act

12U-131
Tengard SFR One Shot

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any HAPs.

CERCLA

SARA Product RQ 0

RCRA

Pesticide Information

Component	FIFRA - Restricted Use	FIFRA - Pesticide Product Other Ingredients	FIFRA - Listing of Pesticide Chemicals	California Pesticides - Restricted Materials
Triacetin 102-76-1 (20-35)			X	
Permethrin technical 52645-53-1 (36.8)			X	

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	X	X		X	
Hydrocarbon solvent	X	X	X		

International regulations

Mexico - Grade Moderate risk, Grade 2

Component	CATEGORY	Carcinogen Status	Exposure limits
Hydrocarbon solvent (>15)			Mexico: TWA 100 ppm Mexico: TWA 523 mg/m ³ Mexico: STEL 200 ppm Mexico: STEL 1050 mg/m ³

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
Hydrocarbon solvent	X

Legend

NPRI - National Pollutant Release Inventory

The preparation is classified as dangerous in accordance with Directive 1999/45/EC

16. Other Information

Revision date 03-Jan-2011

Revision Summary

Update section 11

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End of MSDS