



Material Safety Data Sheet

United Phosphorus, Inc.

| | | |
|-------------|------------|--|
| NFPA | PPE | |
| | | |

Issued Date 24-Jul-2007

Revision Date 18-Feb-2010

Revision Number: 2

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
 UPI

Contact Information
 Customer Service
 R&D Technical Service

Phone Number
 1-800-438-6071
 610-878-6100

Available Hrs
 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
Recommended Use insecticide termiticide
Product Code 12U-131

2. HAZARDS IDENTIFICATION

Emergency Overview
 May cause eye and skin irritation

WARNING!

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. .

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 | 1350 mg/m ³ 300 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 artificial 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

Extinguishing 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 pertinent 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 | | 1350 mg/m ³ 300 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/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

Carcinogenicity .

12. ECOLOGICAL INFORMATION

Ecotoxicity

12. ECOLOGICAL INFORMATION

Permethrin

When applied at agricultural use rates, permethrin has a moderate rate of degradation in soil. At termiticidal use rates, permethrin degrades as a slower rate which is governed by soil characteristics such as soil type, microbial population, concentration in soil, and aerobic conditions of the soils. Due to its high affinity for organic matter ($K_{oc}=86,000$), 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 showed that concentrations of up to 500ppm in the diet had no effect on bird reproduction.

. Permethrin: This product is extremely toxic to fish, aquatic invertebrates, 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 notifying 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 Empty containers may contain hazardous residues. Containers should be handled as instructed by following all container disposal directions .

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 |

14. TRANSPORT INFORMATION

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 |
| 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 | | Substance no. 0206 Listed. | Listed. | | |

International Regulations

Mexico - Grade

Mexico - Grade

| Chemical Name | Category | Carcinogen Status | Exposure Limits |
|---------------------|----------|-------------------|------------------------|
| Hydrocarbon solvent | | A3 | 1350 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

16. OTHER INFORMATION

Revision Date

18-Feb-2010

Revision Summary

Recurrent confirmation/update of data

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End of MSDS