



# Material Safety Data Sheet

## United Phosphorus, Inc.

<b>NFPA</b>	<b>PPE</b>		

Issued Date 13-Dec-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  
 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** Perm-Up 25DF  
**EPA Reg #** 70506-66  
**Recommended Use** insecticide  
**Product Code** 12U-120

## 2. HAZARDS IDENTIFICATION

### Emergency Overview

May cause irritation of respiratory tract  
Highly toxic to fish and aquatic organisms. Keep out of drains and water courses.  
Causes substantial eye irritation which will cause discomfort and is expected to be temporary.

#### WARNING!

**Appearance** off-white.

**Physical State** Powder.

**Odor** faint.

#### Potential Health Effects

**Eyes**

Can cause slight to moderate irritation to the eyes..

**Skin**

May cause sensitization by skin contact.

**Inhalation**

Overexposure may cause irritation to the respiratory tract .

**Ingestion**

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Ingredients Name

Chemical Name	CAS-No	Weight %	OSHA PEL
Silicon dioxide	112926-00-8	10	6 mg/m <sup>3</sup>
Permethrin technical	52645-53-1	25	N/A

## 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 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  
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

**5. FIRE-FIGHTING MEASURES**

**Flammable Explosive Properties**

<b>Flash Point</b>	Not available			
<b>Autoignition Temperature</b>	Not available			
<b>Flammability Limits in Air</b>	Not available			
<b>Extnguishing Media</b>	Carbon dioxide (CO2), Foam Dry chemical.			
<b>Fire/Explosion Hazard</b>	Slightly combustible. This material may support combustion at elevated temperatures.			
<b>Hazardous Combustion Products</b>	Carbon monoxide, Carbon dioxide (CO2), chlorine, Hydrogen chloride, Sulfur oxides.			
<b>NFPA</b>	<table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">Health 1</td> <td style="text-align: center;">Flammability 1</td> <td style="text-align: center;">Instability 0</td> </tr> </table>	Health 1	Flammability 1	Instability 0
Health 1	Flammability 1	Instability 0		

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions</b>	Use personal protective equipment. Remove all sources of ignition. Avoid dust formation. Avoid contact with the skin and the eyes.
<b>Environmental Precautions</b>	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..
<b>Methods for Clean-up</b>	Sweep up and shovel into suitable containers for disposal.

**7. HANDLING AND STORAGE**

<b>Handling</b>	Do not eat, drink or smoke when using this product. Keep out of reach of children. Remove all sources of ignition. Wear personal protective equipment. Avoid dust formation in confined areas.
<b>Storage</b>	Store in an area where cross-contamination with pesticides, fertilizers, food or feed could not occur. .

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL
Silicon dioxide		6 mg/m <sup>3</sup>

**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**

Long sleeved clothing. Long pants. Chemical resistant gloves. Socks and footwear.

**Respiratory Protection**

Avoid breathing dust. When airborne exposure limits are exceeded (see below), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. .

**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**

<b>Appearance</b>	off-white	<b>Odor</b>	faint
<b>Physical State</b>	Powder	<b>pH</b>	(1% solution)7.95
<b>Boiling Point/Range</b>	Not available	<b>Melting Point/Range</b>	Not available
<b>Specific Gravity</b>	0.34 g/mL (tap)	<b>Solubility</b>	Dispersible in water
<b>Evaporation Rate</b>	Not available	<b>Vapor Pressure</b>	Not available
<b>Vapor Density</b>	Not available	<b>VOC Content</b>	Not available
<b>Viscosity</b>	Not available	<b>Molecular Weight</b>	No data available
<b>Bulk Density</b>	No data available	<b>Percent Solids</b>	Not available
<b>Percent Volatiles</b>	Not available		

**10. STABILITY AND REACTIVITY**

<b>Stability</b>	Stable under recommended storage conditions
<b>Conditions to Avoid</b>	Heat, flames and sparks
<b>Incompatible Materials</b>	No materials to be especially mentioned.
<b>Hazardous Decomposition Products</b>	Toxic gases and fumes may be formed if product is involved in fire. .
<b>Possibility of Hazardous Polymerization</b>	Hazardous polymerisation does not occur

**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.

Silicon dioxide  
(crystalline quartz) - prolonged inhalation of dusts containing free silica may result in the development of pulmonary fibrosis known as silicosis. The initial symptom associated with silicosis is shortness of breath. Progression of the condition results on marked fatigue, dyspnea and cyanosis, loss of appetite, and plueritic pain.

**Chronic Toxicity**

There are no known carcinogenic chemicals in this product

**Carcinogenicity**

**IARC: (International Agency for Research on Cancer)**  
Listed (Silica)

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

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

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. . Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag 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

When shipped domestically by highway in non-bulk containers this product can be shipped as not regulated.

When shipped in bulk, by vessel, or internationally use the following shipping description:

## 14. TRANSPORT INFORMATION

ICAO

**UN-No** UN3077  
**Proper Shipping Name** Environmentally hazardous substance, solid, n.o.s (Permethrin)  
**Hazard Class** 9  
**Packing Group** PG III

IATA

**UN-No** UN3077  
**Proper Shipping Name** Environmentally hazardous substances, solid, n.o.s. (Permethrin)  
**Hazard Class** 9  
**Packing Group** PG III  
**ERG Code** 9L

IMDG/IMO

**Proper Shipping Name** Environmentally hazardous substances, solid, n.o.s. (Permethrin)  
**Hazard Class** 9  
**UN-No** UN3077  
**Packing Group** PG III  
**EmS No.** F-A, S-F  
**Special Provisions** 274, 909, 944  
**Marine Pollutant** Yes

## 15. REGULATORY INFORMATION

International Inventories

Silicon dioxide  
**DSL** Listed  
**EINECS/ELINCS** Listed  
**ENCS** Listed  
**CHINA** Listed  
**KECL** Listed  
 Permethrin technical  
**EINECS/ELINCS** Listed  
**ENCS** Listed  
**CHINA** Listed  
**KECL** Listed

USAFederal Regulations

**SARA 313**  
 Y

Chemical Name	CAS-No	Weight %
Permethrin technical	52645-53-1	25

**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
Silicon dioxide	Listed.	Substance no. 1655 Listed.	Listed.		
Permethrin technical	Listed.				

**International Regulations**

**Mexico - Grade**

Mexico - Grade

Chemical Name	Category	Carcinogen Status	Exposure Limits
Silicon dioxide			10 mg/m <sup>3</sup> Inhalable particulate. 3 mg/m <sup>3</sup> Respirable dust.

**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**

23-Dec-2010

**Revision Summary**

Update section 13 Update section 8 Update section 1 Update section 2

UPI, Inc. believes that the information and recommendations contained 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**