Material Safety Data Sheet

**DuPont™ Fontelis™ Fungicide**

Version 2.7

Revision Date 03/05/2012  Ref. 130000012055

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

- **Product name**: DuPont™ Fontelis™ Fungicide
- **Tradename/Synonym**: DPX-LEM17 20 SC Fungicide
- **PENTHIOPYRAD (RS)-N-[2-(1,3-dimethylbutyl)thiophen-3-yl]-1-methyl-3-trifluoromethyl-1H-pyrazole-4-carboxamide**
- **MSDS Number**: 130000012055
- **Product Use**: Fungicide
- **Manufacturer**: DuPont
  
  1007 Market Street
  
  Wilmington, DE 19898

  **Product Information**: 1-800-441-7515 (outside the U.S. 1-302-774-1000)
  
  **Medical Emergency**: 1-800-441-3637 (outside the U.S. 1-302-774-1139)
  
  **Transport Emergency**: CHEMTREC: 1-800-424-9300 (outside the U.S. 1-703-527-3887)

**SECTION 2. HAZARDS IDENTIFICATION**

**Emergency Overview**

*Caution*

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. May be harmful if swallowed. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

This product is toxic to fish.

**Potential Health Effects**

<table>
<thead>
<tr>
<th>Material</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
</table>

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penthiopyrad</td>
<td>183675-82-3</td>
<td>20.4 %</td>
</tr>
<tr>
<td>Other Ingredients</td>
<td></td>
<td>79.6 %</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

Skin contact : The material is not likely to be hazardous by skin contact, but cleansing the skin after use is advisable. Consult a physician if necessary.

Eye contact : No specific intervention is indicated as the compound is not likely to be hazardous. Consult a physician if necessary.

Inhalation : No specific intervention is indicated as the compound is not likely to be hazardous. Consult a physician if necessary.

Ingestion : Call a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Do not give anything by mouth to an unconscious person.

General advice : Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergencies involving this product, call toll free 1-800-441-3637. See Label for Additional Precautions and Directions for Use.

Notes to physician : Treat symptomatically.
SECTION 5. FIREFIGHTING MEASURES

Flammable Properties
Flash point: > 105 °C (> 221 °F)
Ignition temperature: 385 °C (725 °F)

Fire and Explosion Hazard:
Hazardous combustion products: Carbon oxides nitrogen oxides (NOx), sulphur oxides Fluorinated compounds

Suitable extinguishing media:
Water spray, Dry chemical, Carbon dioxide (CO2), Foam

Unsuitable extinguishing media:
High volume water jet, (contamination risk)

Firefighting Instructions:
In the event of fire, wear self-contained breathing apparatus. Wear full protective equipment. Prevent fire extinguishing water from contaminating surface water or the ground water system. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
(on small fires) If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Cool containers / tanks with water spray.

SECTION 6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Safeguards (Personnel):
Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus. Use personal protective equipment.

Spill Cleanup:
Clean-up methods - small spillage Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.
Clean-up methods - large spillage Prevent further leakage or spillage. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal.
Accidental Release Measures:
Prevent material from entering sewers, waterways, or low areas. Never return spills in original containers for re-use. Dispose of in accordance with local regulations.

SECTION 7. HANDLING AND STORAGE

Handling (Personnel):
Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing/PPE immediately if material gets inside. Wash thoroughly and put on clean clothing. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Handling (Physical Aspects):
Keep away from heat and sources of ignition.

Storage:
Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store product in original container only in a location inaccessible to children and pets. Keep in properly labelled containers. Keep in a dry, cool and well-ventilated place. Avoid extreme heat or cold. Keep container closed when not in use. Keep locked up or in an area accessible only to qualified or authorised persons. Keep out of the reach of children. Observe label precautions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls:
When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Personal protective equipment:
Skin and body protection:
Mixers, loaders, applicators and other handlers must wear:
Long sleeved shirt and long pants
Shoes plus socks
Personal protective equipment required for early entry:
Coveralls
Shoes plus socks
Chemical resistant gloves made of any waterproof material

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**Protective measures**: Follow manufacturer’s instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. Use this product in accordance with its label.

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**Exposure Guidelines**

**Exposure Limit Values**

**White mineral oil (petroleum)**

<table>
<thead>
<tr>
<th></th>
<th>(OSHA)</th>
<th>(ACGIH)</th>
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<tbody>
<tr>
<td>PEL:</td>
<td>5 mg/m³</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>TLV:</td>
<td>8 hr. TWA Mist.</td>
<td>TWA Mist.</td>
</tr>
<tr>
<td>TLV:</td>
<td>10 mg/m³</td>
<td>STEL Mist.</td>
</tr>
<tr>
<td>TLV:</td>
<td>5 mg/m³</td>
<td>TWA Inhalable fraction.</td>
</tr>
</tbody>
</table>

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Form**: liquid
**Color**: off-white
**Odor**: slight, ester-like
**pH**: 6.66 at 10 g/l
**Oxidizing**: The product is not oxidizing.
**Specific gravity**: 0.9789
**Water solubility**: dispersible

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**SECTION 10. STABILITY AND REACTIVITY**
Stability : Stable at normal temperatures and storage conditions.

Conditions to avoid : Protect from frost. Heat. Direct sunlight.

Hazardous decomposition products : Carbon oxides, nitrogen oxides (NOx), sulphur oxides, Fluorinated compounds

SECTION 11. TOXICOLOGICAL INFORMATION

**DuPont™ Fontelis™ Fungicide**

**Inhalation 4 h LC50** : > 3.5 mg/l, rat

**Dermal LD50** : > 5,000 mg/kg, rat

**Oral LD50** : > 5,000 mg/kg, rat

**Skin irritation** : No skin irritation, rabbit

**Eye irritation** : No eye irritation, rabbit

**Sensitisation** : Marginal response interpreted as negative in animal tests., May cause sensitization of susceptible persons by skin contact.

**Penthiopyrad**

**Repeated dose toxicity** : The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.

**Oral multiple species**

Reduced body weight gain, Liver effects, Thyroid effects, Spleen effects, Gallbladder effects, Liver enlargement, Immune system effects, altered blood chemistry, altered hematology, Organ weight changes, Decreased spleen weight, Increased liver weight

**Carcinogenicity** : The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.

A slight increased incidence in tumors was observed in animal studies.

**Mutagenicity** : Did not cause genetic damage in animals.
Did not cause genetic damage in cultured bacterial cells. Genetic damage in cultured mammalian cells was observed in one laboratory test but was not observed in others.

Reproductive toxicity: Animal testing did not show any effects on fertility.

Teratogenicity: The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.

Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity

<table>
<thead>
<tr>
<th>Duration</th>
<th>Endpoint</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>96 h</td>
<td>LC50</td>
<td>Oncorhynchus mykiss (rainbow trout) 0.36 mg/l</td>
</tr>
<tr>
<td>72 h</td>
<td>EbC50</td>
<td>Pseudokirchneriella subcapitata (green algae) 1.5 mg/l</td>
</tr>
<tr>
<td>72 h</td>
<td>ErC50</td>
<td>Pseudokirchneriella subcapitata (green algae) &gt; 2.1 mg/l</td>
</tr>
<tr>
<td>48 h</td>
<td>EC50</td>
<td>Daphnia magna (Water flea) 0.060 mg/l</td>
</tr>
</tbody>
</table>

Additional ecological information: Environmental Hazards: This product is toxic to fish. For Terrestrial Uses: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. See product label for additional application instructions relating to environmental precautions.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal: Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product must be disposed of on site or at an approved waste

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disposal facility.

Container Disposal : Refer to the product label for instructions.
Do not transport if this container is damaged or leaking.

In the event of a major spill, fire or other emergency, call 1-800-441-3637 day or night.

SECTION 14. TRANSPORT INFORMATION

IATA_C

UN number : 3082
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s. (Penthiopyrad)
Class : 9
Packing group : III
Labelling No. : 9

IMDG

UN number : 3082
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s. (Penthiopyrad)
Class : 9
Packing group : III
Labelling No. : 9
Marine pollutant : yes (Penthiopyrad)

Not regulated by DOT/49 CFR unless shipped in bulk package or by water.

SECTION 15. REGULATORY INFORMATION

SARA 313 Regulated Chemical(s) : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

EPA Reg. No. : 352-834
In the United States this product is regulated by the US Environmental
Protection Agency (EPA) under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

PA Right to Know Regulated Chemical(s): Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Substances): White mineral oil (petroleum) highly refined, Propane-1,2-diol

SECTION 16. OTHER INFORMATION

™ Trademark of E.I. du Pont de Nemours and Company.

Contact person: DuPont Crop Protection, Wilmington, DE, 19898, Phone: 1-888-638-7668

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