

DYNASTY® PD

Date: 4/13/2015
Replaces: 11/29/2012

1. PRODUCT IDENTIFICATION

Product identifier on label: **DYNASTY® PD**
Product No.: A13848D
Use: Fungicide
Manufacturer: Syngenta Crop Protection, LLC
Post Office Box 18300
Greensboro NC 27419
Manufacturer Phone: 1-800-334-9481

Emergency Phone: 1-800-888-8372

2. HAZARDS IDENTIFICATION

Classifications: Specific Target Organ Toxicity: Repeated Category 2
Specific Target Organ Toxicity: Respiratory Irritation Category 3
Signal Word (OSHA): Warning
Hazard Statements: May cause respiratory irritation
May cause damage to organs through prolonged or repeated exposure

Hazard Symbols:



Precautionary Statements: Do not breathe dust.
Use only outdoors or in a well-ventilated area.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Call a poison center, doctor or Syngenta if you feel unwell.
Store locked up.
Dispose of contents and container in accordance with local regulations.

Other Hazard Statements: May form combustible dust concentrations in air.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | Common Name | CAS Number | Concentration |
|-------------------|-------------------|-------------|---------------|
| Talc | Talc | 14807-96-6 | Trade Secret |
| Starch | Starch | 9005-25-8 | Trade Secret |
| Silica, amorphous | Silica, amorphous | 112926-00-8 | Trade Secret |

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|--|-------------------|-------------------------|--------------|
| Calcium Silicate | Calcium Silicate | 1344-95-2 | Trade Secret |
| Petroleum Solvent | Petroleum Solvent | 64742-56-9 | Trade Secret |
| Other ingredients | Other ingredients | Trade Secret | <94.4% |
| Methyl (E)-2-[2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy]phenyl]-3-methoxyacrylate | Azoxystrobin | 131860-33-8 | 3.20% |
| (R,S)-2-[(2,6-dimethylphenyl)-methoxyacetyl-amino]-propionic acid methyl ester | Mefenoxam | 70630-17-0 & 69516-34-3 | 0.40% |
| 4-(2,2-difluoro-1,3-benzodioxol-4-yl)-1H-pyrrole-3-carbonitrile | Fludioxonil | 131341-86-1 | 2.00% |

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

4. FIRST AID MEASURES

Have the product container, label or Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison control center or doctor, or going for treatment.

- Ingestion:** If swallowed: Call Syngenta (800-888-8372), a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
- Eye Contact:** If in eyes: 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 Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
- Skin Contact:** If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
- Inhalation:** If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call Syngenta (800-888-8372), a poison control center or doctor for further treatment advice.

Most important symptoms/effects:

Respiratory irritation

Indication of immediate medical attention and special treatment needed:

There is no specific antidote if this product is ingested.

Treat symptomatically.

Contains petroleum distillate - vomiting may cause aspiration pneumonia.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

Use dry chemical, foam or CO2 extinguishing media. If water is used to fight fire, dike and collect runoff.

Specific Hazards:

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

See also Sec. 7.

Special protective equipment and precautions for firefighters:

Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion.

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures:

Follow exposure controls/personal protection outlined in Section 8.

Methods and materials for containment and cleaning up:

Avoid dust formation.

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Sweep up material and place in a compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

Precautions for safe handling:

This material is capable of forming flammable dust clouds in air, which, if ignited, can produce a dust cloud explosion. Flames, hot surfaces, mechanical sparks and electrostatic discharges can serve as ignition sources for this material. Electrical equipment should be compatible with the flammability characteristics of this material. The flammability characteristics will be made worse if the material contains traces of flammable solvents or is handled in the presence of flammable solvents.

This material can become readily charged in most operations.

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Conditions for safe storage, including any incompatibilities:

Store locked up.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Occupational Exposure Limits:

| Chemical Name | OSHA PEL | ACGIH TLV | Other | Source |
|-------------------|--|--|--|--------|
| Talc | 20 mppcf (containing <1% quartz) TWA | 2 mg/m ³ (respirable; <1% crystalline silica) TWA | 2 mg/m ³ (respirable; <1% quartz) TWA | NIOSH |
| Starch | 15 mg/m ³ (total) TWA; 5 mg/m ³ (resp) TWA | 10 mg/m ³ TWA | 10 mg/m ³ (total) TWA; 5 mg/m ³ (resp) TWA | NIOSH |
| Silica, amorphous | 80 mg/m ³ / % SiO ₂ TWA | Not Established | 6 mg/m ³ TWA | NIOSH |
| Calcium Silicate | 15 mg/m ³ TWA (total); 5 mg/m ³ TWA (respirable) | 10 mg/m ³ TWA (irritation) | 10 mg/m ³ TWA (total); 5 mg/m ³ TWA (respirable) | NIOSH |

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|-------------------|-----------------|---|-------------------------|----------------|
| Petroleum Solvent | Not Established | 5 mg/m ³ TWA; 10 mg/m ³ STEL (lung) | 5 mg/m ³ TWA | Manufacturer |
| Other ingredients | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| Azoxystrobin | Not Established | Not Established | 4 mg/m ³ TWA | Syngenta |
| Mefenoxam | Not Established | Not Established | 5 mg/m ³ TWA | Syngenta |
| Fludioxonil | Not Established | Not Established | 5 mg/m ³ TWA | Syngenta |

Appropriate engineering controls:

Use effective engineering controls to comply with occupational exposure limits (if applicable).

Individual protection measures:

Ingestion:

Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Eye Contact:

Where eye contact is likely, use dust-proof chemical goggles.

Skin Contact:

Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, nitrile rubber, neoprene rubber or Viton), coveralls, socks and chemical-resistant footwear.

Inhalation:

A particulate filter respirator may be necessary until effective engineering controls are installed to comply with occupational exposure limits. Use NIOSH certified respirator with any N, R, P or HE filter. Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Evenly colored red powder, free of lumps

Odor: Musty

Odor Threshold: Not Available

pH: 9.2 (1% solution in deionized H₂O @ 77°F [25°C])

Melting point/freezing point: Not Available

Initial boiling point and boiling range: Not Available

Flash Point (Test Method): Not Available

Flammable Limits (% in Air): Not Available

Flammability: Not Available

Vapor Pressure: Azoxystrobin 8.25 x 10⁻¹³ mmHg @ 68°F (20°C)

Fludioxonil 2.9 x 10⁻⁹ mmHg @ 77°F (25°C)

Mefenoxam 2.5 x 10⁻⁵ mmHg @ 77°F (25°C)

Vapor Density: Not Available

Relative Density: 0.529 - 0.563 g/ml ; 31 - 35 lb/ft³ (Bulk density - loose fill)

Solubility (ies): Azoxystrobin 6 mg/l in water @ 68°F (20°C)

Fludioxonil 1.8 mg/l @ 77°F (25°C)

Mefenoxam 26 g/l @ 77°F (25°C)

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Partition coefficient: n-octanol/water: Not Available
Autoignition Temperature: Not Available
Decomposition Temperature: Not Available
Viscosity: Not Available
Other: None

10. STABILITY AND REACTIVITY

Reactivity: Not reactive.
Chemical stability: Stable under normal use and storage conditions.
Possibility of hazardous reactions: Will not occur.
Conditions to Avoid: Not Available
Incompatible materials: None known.
Hazardous Decomposition Products: Not Available

11. TOXICOLOGICAL INFORMATION

Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Respiratory irritation

Delayed, immediate and chronic effects of exposure: Respiratory irritation

Numerical measures of toxicity (acute toxicity/irritation studies (finished product))

| | | |
|---------------------|--|--|
| Ingestion: | Oral (LD50 Rat) : | > 5000 mg/kg body weight (based on a substantially similar formulation) |
| Dermal: | Dermal (LD50 Rat) : | > 5000 mg/kg body weight (based on a substantially similar formulation) |
| Inhalation: | Inhalation (LC50 Rat) : | > 5.37 mg/l air - 4 hours (based on a substantially similar formulation) |
| Eye Contact: | Non-Irritating (Rabbit) (based on a substantially similar formulation) | |
| Skin Contact: | Practically Non-Irritating (Rabbit) (based on a substantially similar formulation) | |
| Skin Sensitization: | Not a Sensitizer (Guinea Pig) (based on a substantially similar formulation) | |

Reproductive/Developmental Effects

Azoxystrobin : Did not show reproductive toxicity effects in animal experiments.
Fludioxonil: Delayed development at doses causing maternal toxicity.
Mefenoxam: None observed.

Chronic/Subchronic Toxicity Studies

Azoxystrobin : No adverse effect has been observed in chronic toxicity tests.

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Fludioxonil: Liver and kidney toxicity at high dose levels.

Mefenoxam: Liver effects at high dose animal tests.

Carcinogenicity

Azoxystrobin : Did not show carcinogenic effects in animal experiments.

Fludioxonil: Marginal increase (7%) of liver tumors (female, rats: 3,000 ppm); Within historical control range (1 to 10%).

Mefenoxam: None observed.

| Chemical Name | NTP/IARC/OSHA Carcinogen |
|---------------|--------------------------|
|---------------|--------------------------|

| | |
|--|--------------|
| Talc | IARC Group 3 |
| Starch | No |
| Silica, amorphous | IARC Group 3 |
| Calcium Silicate | No |
| Petroleum Solvent | No |
| Other ingredients | No |
| Methyl (E)-2-{2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy]phenyl}-3-methoxyacrylate | No |
| (R,S)-2-[(2,6-dimethylphenyl)-methoxyacetyl-amino]-propionic acid methyl ester | No |
| 4-(2,2-difluoro-1,3-benzodioxol-4-yl)-1H-pyrrole-3-carbonitrile | No |

Other Toxicity Information

None

Toxicity of Other Components

Calcium Silicate

May cause skin or eye irritation upon prolonged or repeated contact.

Other ingredients

Not Applicable

Petroleum Solvent

Prolonged or repeated skin contact may cause skin irritation. Vapors may cause drowsiness or dizziness.

Silica, amorphous

Dusts in high concentrations may cause skin, eye and respiratory tract irritation.

Starch

May cause eye and skin irritation. May cause respiratory tract irritation.

Talc

Limited potential for respiratory disease.

Target Organs

Active Ingredients

| | |
|----------------|---------------|
| Azoxystrobin : | Liver |
| Fludioxonil: | Liver, kidney |
| Mefenoxam: | Liver |

Inert Ingredients

| | |
|-------------------|-----------|
| Calcium Silicate: | Skin, eye |
|-------------------|-----------|

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| | |
|--------------------|------------------------------|
| Other ingredients: | Not Applicable |
| Petroleum Solvent: | Skin, CNS |
| Silica, amorphous: | Skin, eye, respiratory tract |
| Starch: | Eye, skin, respiratory tract |
| Talc: | Respiratory tract |

12. ECOLOGICAL INFORMATION

Eco-Acute Toxicity

Azoxystrobin :

Fish (Rainbow Trout) 96-hour LC50 470 ppb
Green Algae 5-day EC50 106 ppb
Invertebrate (Water Flea) 48-hour EC50 259 ppb
Bird (Mallard Duck) 14-day LD50 > 250 mg/kg

Mefenoxam:

Fish (Rainbow Trout) 96-hour LC50 > 121 ppm
Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 > 113 ppm
Bird (Bobwhite Quail) 14-day LD50 981 mg/kg

Fludioxonil:

Fish (Rainbow Trout) 96-hour LC50 0.47 ppm
Green Algae 5-day EC50 0.087 ppm
Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 0.9 ppm
Bird (Bobwhite Quail) 14-day LD50 > 2000 mg/kg

Environmental Fate

Azoxystrobin :

The information presented here is for the active ingredient, azoxystrobin.
Low bioaccumulation potential. Not persistent in soil. Stable in water. Moderate mobility in soil. Sinks in water (after 24 h).

Fludioxonil:

The information presented here is for the active ingredient, fludioxonil.
Does not bioaccumulate. Persistent in soil. Stable in water. Low mobility in soil. Sinks in water (after 24 h).

Mefenoxam:

The information presented here is for the active ingredient, mefenoxam.
Does not bioaccumulate. Not persistent in soil or water. Moderate mobility in soil. Mixes/sinks (after 24 h).

13. DISPOSAL CONSIDERATIONS

Disposal:

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

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14. TRANSPORT INFORMATION

DOT Classification

Ground Transport - NAFTA

Not regulated

Comments

Water Transport - International

Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Azoxytrobilin), Marine Pollutant

Hazard Class: Class 9

Identification Number: UN 3077

Packing Group: PG III

Air Transport

Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Azoxytrobilin)

Hazard Class: Class 9

Identification Number: UN 3077

Packing Group: PG III

15. REGULATORY INFORMATION

Pesticide Registration:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Caution: Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling.

EPA Registration Number(s):

100-1190

EPCRA SARA Title III Classification:

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: None

CERCLA/SARA 304 Reportable Quantity (RQ):

None

RCRA Hazardous Waste Classification (40 CFR 261):

Not Applicable

TSCA Status:

Exempt from TSCA, subject to FIFRA

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16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 1
Flammability: 1
Instability: 0

HMIS Hazard Ratings

Health: 1
Flammability: 1
Reactivity: 0

| | |
|---|----------|
| 0 | Minimal |
| 1 | Slight |
| 2 | Moderate |
| 3 | Serious |
| 4 | Extreme |
| * | Chronic |

Syngenta Hazard Category: B,S

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 5/12/2010

Revision Date: 4/13/2015

Replaces: 11/29/2012

Section(s) Revised: 1-16

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.