

7969-105

12-22-2009

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Edward G. Jordan
BASF Corporation
26 Davis Drive
Research Triangle Park, NC 27709

DEC 22 2009

Subject: Polyram 80 DF Fungicide
EPA Reg. No. 7969-105
Your submission dated September 30, 2009
EPA Decision Number 423576

Dear Mr. Jordan:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable providing the following changes are made:

1. On page 1, in the ingredients statement, revise the first line to read "Metiram: A mixture of 5.2 parts. . ."
2. On page 5, second column under Extended Application Schedule, revise the rate section as follows: "Rate: Do not apply more than 3 pounds of Polyram 80 DF. . ."
3. On page 5, under Apple Tank Mixes, revise the second sentence to read "Observe all precautions and limitations on labeling. . ."

One copy of the label stamped "Accepted" is enclosed for your records. Please submit one copy of the final printed label before the product is released for shipment.

If you have any questions, please contact Robert Westin by phone at (703) 305-5721 or via email at westin.robert@epa.gov.

Sincerely,

Mary L. Waller
Product Manager (21)
Fungicide Branch
Registration Division (7505P)

Enclosure



The Chemical Company

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ACCEPTED
with COMMENTS
In EPA Letter Dated

DEC 22 2009

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.

7969-105

Polyram[®] 80 DF

fungicide

Active Ingredients:

A mixture of 5.2 parts by weight (83.9%) of ammoniates of [ethylenebis (dithiocarbamate)]-zinc with 1 part by weight (16.1%) ethylenebis (dithiocarbamic acid) bimolecular and trimolecular cyclic anhydrosulfides and disulfides..... 80.0%

Other Ingredients: 20.0%

Zinc expressed as metallic (14.0%)

Total:..... 100.0%

EPA Reg. No. 7969-105

EPA Est. No.

**KEEP OUT OF REACH OF CHILDREN
CAUTION/PRECAUCIÓN**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See inside for complete **First Aid, Precautionary Statements, Directions For Use,** and **Conditions of Sale and Warranty,** and state-specific crop and/or use site restrictions.

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

Made in Germany

Net Contents:

FIRST AID	
If on skin or clothing	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
If in eyes	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If swallowed	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • DO NOT induce vomiting unless told to do so by the poison control center or doctor. • DO NOT give anything by mouth to an unconscious person.
HOT LINE NUMBER	
<p>Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357).</p>	

Precautionary Statements

Hazards to Humans and Domestic Animals

Caution. Harmful if swallowed, inhaled, or absorbed through skin. Avoid breathing dust or spray mist. Avoid contact with skin, eyes, or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Causes moderate eye irritation. See next page for additional precautionary statements.

Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are natural rubber ≥ 14 mils. If you want more options, follow the instructions for **category A** on an EPA chemical-resistance category selection chart.

Mixers and loaders supporting aerial applications or use in chemigation systems and handlers cleaning up spills must wear:

- coveralls over long-sleeved shirt and long pants,
- chemical-resistant gloves,
- chemical-resistant footwear plus socks,
- chemical-resistant apron, and
- a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any R, P, or HE filter.

All other handlers must wear:

- long-sleeved shirt,
- long pants,
- shoes and socks,
- chemical-resistant gloves when applying by airblast sprayer, and
- a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any R, P, or HE filter when applying by airblast sprayer and when flagging.

See engineering controls for additional options and requirements.

Wash thoroughly with soap and water after handling. Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them. Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Enclosed Cockpits

Engineering Controls: Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)] and must wear a long-sleeved shirt, long pants, shoes and socks.

Engineering Control Statement for Optional Use (WPS Only)

Engineering Controls: When handlers use enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(5)], the handler PPE requirements may be reduced or modified as specified in the WPS.

During aerial application, human flaggers must be in enclosed cabs.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside, then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

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Environmental Hazards

This product is toxic to aquatic organisms. **DO NOT** apply directly to water or to areas where surface water is present, or to inter-tidal areas below the mean high water mark. **DO NOT** contaminate water when cleaning equipment or disposing of equipment washwaters or rinsates. Apply this product only as specified on the label. **DO NOT** allow this material to drift onto neighboring crops or non-crop areas or use in a manner or at a time other than in accordance with label directions because animal, plant or crop injury, illegal residues or other undesirable results may occur.

Endangered Species Concerns

The use of any pesticide in a manner that may kill or otherwise harm an endangered species or adversely modify their habitat is a violation of federal law.

Directions For Use

It is a violation of federal law to use this product in a manner inconsistent with its labeling. **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. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

All applicable directions, restrictions, precautions and **Conditions of Sale and Warranty** are to be followed. This labeling must be in the user's possession during application.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **24 hours**.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes and socks

Storage and Disposal

DO NOT contaminate water, food, or feed by storage or disposal.

Pesticide Storage: Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, fold and roll back bags, clamp and close tightly. **DO NOT** put concentrate or dilute material into food or drink containers.

Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use 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.

CONTAINER DISPOSAL

(for paper or plastic bags)

Nonrefillable Container. DO NOT reuse or refill this container. After completely emptying container into application equipment, dispose of empty bag in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

In Case of Emergency

In case of large-scale spillage regarding this product, call:
CHEMTREC 1-800-424-9300
BASF Corporation 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment.
- Your local poison control center (hospital).
- BASF Corporation 1-800-832-HELP (4357)

I. General Information

Polyram® 80 DF fungicide is effective for controlling apple scab, apple rusts, and early blight and late blight in potatoes. It is recommended that **Polyram 80 DF** be used in an integrated Pest Management Program.

Crop Tolerance

All listed crops are tolerant to **Polyram 80 DF** at all stages of growth.

Coverage

Polyram 80 DF is a contact fungicide, therefore, thorough coverage of plant parts to be protected is essential for effective disease control.

Cleaning Spray Equipment

Clean application equipment thoroughly using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions before and after applying this product.

II. Application Instructions

Polyram® 80 DF fungicide may only be used at the rates listed in section **VI. Crop-Specific Information**.

Ground Application (Broadcast)

Water Volume: Use a minimum of 20 gallons per acre for apples. Use a minimum of 15 gallons per acre for potatoes.

Aerial Application

Water Volume: Use a minimum of 10 gallons per acre for apples. Use a minimum of 5 gallons per acre for potatoes.

SPRAY DRIFT MANAGEMENT

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

Wind Speed

DO NOT apply at wind speeds greater than 15 mph.

Temperature Inversions

If applying at wind speeds less than 3 mph, the applicator must determine if, a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. **DO NOT** make applications into areas of temperature inversions or stable atmospheric conditions.

Other State and Local Requirements

Applicators must follow all state and local pesticide drift requirements regarding application of metiram. Where states have more stringent regulations, they must be observed.

Equipment

All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

Additional requirements for aerial applications:

1. The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.
2. Release spray at the lowest height consistent with efficacy and flight safety. **DO NOT** release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.
3. When applications are made with a crosswind, the swath must be displaced downwind. The applicator must compensate for this displacement at the up and downwind edge of the application area by adjusting the path of the aircraft upwind.

Additional requirements for ground boom application:

1. **DO NOT** apply with a nozzle height greater than 4 feet above the crop canopy.

Foliar Applications

• **Where EBDC products used allow the same maximum poundage of active ingredient per acre per season:** If more than one product containing an EBDC active ingredient (maneb, mancozeb, or metiram) is used

on a crop during the same growing season and the EBDC products used allow the same maximum poundage of active ingredient per acre per season, then the total poundage of all such EBDC products used must not exceed any of the specified individual product maximum seasonal poundage of EBDC active ingredient allowed per acre.

• **Where EBDC products used allow the different maximum poundage of active ingredient per acre per season:** If more than one product containing an EBDC active ingredient is used on a crop during the same growing season and the EBDC products used allow different maximum poundage of active ingredient per acre per season, then the total poundage of all such EBDC products used must not exceed the lowest specified individual EBDC product maximum seasonal poundage of active ingredient allowed per acre.

Seed Treatment

In addition to the maximum number of foliar applications permitted by the formula stated above, a single seed treatment application may be made on potatoes.

III. Additives

To achieve consistent control, spray oils may be needed. For additional information, see **Compatibility Test for Mix Components**.

Compatibility Test for Mix Components

Add components in the following sequence using 2 teaspoons for each pound or 1 teaspoon for each pint of recommended label rate per acre.

- 1) **Water.** For 20 gallons per acre spray volume, use 3.3 cups (800 ml) of water. For other spray volumes, adjust rates accordingly. Use only water from the intended source at the source temperature.
- 2) **Products in PVA bags.**
- 3) **Water-dispersible products** (such as **Polyram 80 DF**, wettable powders, suspension concentrates, or suspo-emulsions). Cap the jar and invert 10 cycles.
- 4) **Water-soluble products** Cap the jar and invert 10 cycles.
- 5) **Emulsifiable concentrates** Cap the jar and invert 10 cycles.
- 6) **Water-soluble additives** Cap the jar and invert 10 cycles.
- 7) Let the solution stand for 15 minutes.
- 8) **Evaluate** the solution for uniformity and stability. The spray solution should not have free oil on the surface, nor fine particles that precipitate to the bottom, nor thick clabbered texture. **DO NOT** use any spray solution that could clog spray nozzles.

IV. Mixing Order

- 1) **Water:** Begin by agitating a thoroughly clean sprayer tank three-quarters full of clean water.
- 2) **Agitation:** Maintain constant agitation throughout mixing and application.
- 3) **Products in PVA bags:** Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
- 4) **Water-dispersible products** (such as **Polyram® 80 DF fungicide**, wettable powders, suspension concentrates, or suspo-emulsions).
- 5) **Water-soluble products**
- 6) **Emulsifiable concentrates:** If an inductor is used, rinse it thoroughly after the component has been added.
- 7) **Water-soluble additives:** If an inductor is used, rinse it thoroughly after the component has been added.
- 8) Remaining quantity water

Maintain constant agitation during application. For more information, refer to section **V. General Tank Mixing Information**.

V. General Tank Mixing Information

See section **VI. Crop-Specific Information** for more details. Read and follow the applicable **Restrictions and Limitations** and **Directions For Use** on all products involved in tank mixing. The most restrictive labeling applies to tank mixes.

Tank Mix Partners/Components

Refer to Section **VI. Crop-Specific Information** for more details regarding tank mixes with **Polyram 80 DF**. BASF does not recommend using tank mixes other than those listed on BASF labeling. Physical incompatibility, reduced disease control, or crop injury may result from mixing **Polyram 80 DF** with other pesticides (fungicides, herbicides, insecticides, or miticides), additives, or fertilizers. Local agricultural authorities may be a source of information when using other than BASF recommended tank mixes.

DO NOT tank mix with any product which contains a prohibition on tank mixing.

VI. Crop-Specific Information

Apples

Application Information:

For control of apple scab and apple rusts, **Polyram 80 DF** should be used as a resistance management tool. Applications are based on tree-row volume. It is recommended that **Polyram 80 DF** be used in an Integrated Pest Management program. Use only on a protective schedule.

DO NOT combine or integrate the pre-bloom and extended application schedule.

Pre-bloom Application Schedule

Timing: Begin application at 0.25-0.5 inch green tip and continue at 7-10 day intervals.

Rate: Apply up to 4.5 pounds of **Polyram 80 DF** per acre, per application.

Pre-bloom Restrictions and Limitations

- **DO NOT** apply **Polyram 80 DF** after bloom.
- **DO NOT** apply more than 3 applications of **Polyram 80 DF** per season.
- **DO NOT** apply more than 4.5 pounds of **Polyram 80 DF** per acre, per pre-bloom application.
- **DO NOT** apply more than 3.6 pounds of active ingredient per acre, per pre-bloom application.
- **DO NOT** apply more than 13.5 pounds of **Polyram 80 DF** per acre per season.

Extended Application Schedule

Timing: Begin application at 0.25-0.5" green tip and apply at 7-10 day intervals.

Rate: Apply up to 3 pounds of **Polyram 80 DF** per acre, per application.

Extended Application Restrictions and Limitations

- **DO NOT** apply more than 7 applications of **Polyram 80 DF** per season.
- **DO NOT** apply within 77 days of harvest.
- **DO NOT** apply more than 21 pounds of **Polyram 80 DF** per acre per season.

Crop-Specific Restrictions and Limitations

- **DO NOT** combine or integrate the "pre-bloom" and "extended application" schedules.
- **DO NOT** graze livestock in treated areas.

Apple Tank Mixes

Polyram 80 DF is compatible with most of the apple pesticides with which it might be normally used, including spray oils, **Kelthane®**, and diazinon. Observe all cautions and limitations on labeling of all products used in mixes.

Potatoes

Application Information:

Apply **Polyram 80 DF** to potatoes for control of early blight and late blight. Rates are based on 100 gallons per acre. It is recommended that **Polyram 80 DF** be used in an Integrated Pest Management program. Vinekill should occur 14 days before harvest.

Rate: Apply 1.5 -2.0 pounds of **Polyram 80 DF** per acre.

Timing: Begin application when plants are 4-6" high or earlier if disease conditions warrant, at 5-10 day intervals when disease pressure is low, and at 5-7 day intervals when disease pressure is high.

Chemigation

Apply by chemigation only to potatoes using only sprinkler irrigation systems. **DO NOT** apply chemigation to any

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other crop or to this crop using any other type of irrigation equipment. Apply this product only through one of the following types of systems: sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems.

DO NOT apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

DO NOT connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain a functional interlocking control to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump motor must include a functional pressure switch to stop the water pump motor when the water pressure decreases to the point where a pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

DO NOT apply when wind speed favors drift beyond the area intended for treatment.

Agitation must be maintained in the supply tank.

Crop Specific Restrictions and Limitations:

- **DO NOT** apply more than 6 applications of **Polyram® 80 DF fungicide** per acre per season.
- **DO NOT** apply more than 12 pounds of **Polyram 80 DF** per acre per season.
- **DO NOT** apply within 14 days of harvest in all states except Connecticut, Delaware, Florida, Massachusetts, Maine, Michigan, New Hampshire, New York, Ohio,

Pennsylvania, Rhode Island, Vermont, and Wisconsin. In these states, **DO NOT** apply within 3 days of harvest.

- **DO NOT** graze livestock in treated areas.

Potato Tank Mixes

Polyram 80 DF is compatible with most of the potato pesticides with which it might normally be used. Observe all cautions and limitations on labeling of all products used in mixes.

Crops	
This product can be used on the following crops:	
Apples	
Potatoes	
Look inside for complete Restrictions and Limitations and Application Instructions .	

Pests listed in this label	
Common Name	Scientific Name
Apple Scab	<i>Venturia inaequalis</i>
Apple Rust	<i>Gymnosporangium</i> spp.
Early Blight	<i>Alternaria solani</i>
Late Blight	<i>Phytophthora infestans</i>

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

WARNING: This product contains a chemical known to the State of California to cause cancer.

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Conditions of Sale and Warranty

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above.

To the extent consistent with applicable law, BASF makes no other express or implied warranty of fitness or merchantability or any other express or implied warranty.

To the extent consistent with applicable law, Buyer's exclusive remedy and BASF's exclusive liability, whether in contract, tort, negligence, strict liability, or otherwise, shall be limited to repayment of the purchase price of the product.

To the extent consistent with applicable law, BASF and the Seller disclaim any liability for consequential, special or indirect damages resulting from the use or handling of this product.

BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF.

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Polyram is a registered trademark of BASF AG.

Kelthane is a registered trademark of Rohm and Haas Company.

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The Chemical Company