

PM 21 241-383 9-30-98 1041



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505C)
401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg. Number:
241-383

Date of Issuance:
SEP 30 1998

Term of Issuance:
Conditional

Name of Pesticide Product:
ACROBAT® MZ Fungicide

NOTICE OF PESTICIDE:

XX Registration
Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

**American Cyanamid Company
Agricultural Research Division
P.O. Box 400
Princeton, NJ 08543-0400
ATTN.: Desiree Little**

Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his action, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.
2. Revise the EPA Registration Number to read, "EPA Reg. No. 241-383".
3. The following confirmatory data must be submitted to the Agency within two (2) years from the date of registration:

- *71-1a/b Acute Avian Oral - Quail/Duck (TEP)
- *71-2a/b Acute Avian Dietary - Quail/Duck (TEP)
- *71-4a/b Avian Reproduction - Quail/Duck (TEP)
- *72-1a/b Acute Fish Bluegill (TGAI/TEP)
- *72-2a Acute Aquatic Invertebrate (TGAI)
- *72-3d Acute Estuarine/Marine Toxicity - Fish (TEP)
- *72-3e Acute Estuarine/Marine Toxicity - Mollusk (TEP)
- *72-3f Acute Estuarine/Marine Toxicity - Shrimp (TEP)
- *72-4a Freshwater Early Life Stage Fish (TGAI)

(continued on page 2)

Signature of Approving Official:
Mary L. Waller
Product Manager (21), Fungicide Branch,
Registration Division (7505C)

Date:
SEP 30 1998

- *72-4a/b Estuarine Life Cycle Aquatic Invertebrate (TGAI/TEP)
- *72-5 Freshwater Life Cycle Fish (TEP)
- 162-2 Anaerobic Soil Metabolism
- *162-3 Anaerobic Aquatic Metabolism
- *162-4 Aerobic Aquatic Metabolism
- 163-1 Mobility
- 164-1 Terrestrial Field Dissipation - Soil
- 165-1 Confined Rotational Crops
- 165-2 Field Rotational Crops - Wheat
- 165-4 Bioaccumulation in Fish

- * The potential for synergistic effects between dimethomorph and mancozeb is not fully understood by the Agency. These data may be required unless the registrant can address this issue.
- 3. Submit one copy of the revised final printed label for the record.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

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ACROBAT® MZ
Fungicide

WETTABLE POWDER

A fungicide for the management of late blight in potatoes

ACTIVE INGREDIENTS:

dimethomorph.....	9.0%
mancozeb.....	60.0%
INERT INGREDIENTS.....	31.0%
TOTAL.....	100.0%

EPA Reg. No. 241-

EPA Est. No.

KEEP OUT OF REACH OF CHILDREN

CAUTION/PRECAUCION

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

See inside for Additional Precautionary Statements
See Directions for Use inside

In case of an emergency endangering life or property involving this product, call collect, day or night (973) 683-3100.

(Company Logo)

ACCEPTED
9/30/98
<small>Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 241-383</small>

Net Contents: 22.5 lbs

American Cyanamid Company
North America Agricultural Products Division
Crop Protection Products Department
One Campus Drive, Parsippany, NJ 07054 ©1998

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STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention if symptoms persist.

IF IN EYES: Flush eyes with plenty of water. Call a physician if irritation persists.

IF INHALED: Remove victim to fresh air.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)

CAUTION

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Do not breathe dust or spray mist. Avoid contact with skin, eyes and clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Applicators and other handlers (other than mixers or loaders) must wear:

- Coveralls over long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

Mixers and Loaders must wear:

- Coveralls over long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks
- Protective eyewear
- Chemical-resistant apron when cleaning equipment, mixing or loading
- Dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C)

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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

When handlers use the enclosed cabs 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 handlers PPE requirements may be reduced or modified as specified in the WPS.

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User Safety Recommendations:

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- 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.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or disposing of wastes.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

THIS LABEL MUST BE IN THE POSSESSION OF THE USER AT THE TIME OF FUNGICIDE APPLICATION. DO NOT apply this product through any type of irrigation system unless the label instructions on chemigation are followed. See below for Chemigation Use Directions.

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.

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.

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PPE requirements 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 over long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

STORAGE AND DISPOSAL:

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

Storage:

Store in a cool, well-ventilated area. DO NOT allow to become overheated in storage. Keep container closed when not in use.

Pesticide Disposal:

Wastes resulting from the use of this product may be disposed of on-site or at an approved waste disposal facility.

Container Disposal: Completely empty bag into application equipment. Then 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.

GENERAL INFORMATION

ACROBAT MZ can be used in a preventative spray program to manage late blight in potatoes.

Dual and complementary modes of action provided by ACROBAT MZ make it ideal for late blight management programs where fungicide rotation is emphasized to help prevent the development of disease resistance.

Carefully read, understand, and follow all directions and precautions.

Disease pressure and environmental conditions will determine the length of the spray interval. Sprayers should be properly calibrated before application. Determine the exact number of acres to be sprayed, and output per acre to determine how much ACROBAT MZ and water is needed for accurate applications.

DISEASES CONTROLLED

<u>Crop</u>	<u>Disease</u>
Potatoes	<i>Phytophthora infestans</i>

MIXING INSTRUCTIONS

Fill the spray tank until it is approximately 1/2 full with clean water. Add ACROBAT MZ to the spray tank while agitating. Agitation must be engaged prior to the addition of the product to obtain a complete and uniform mixture of ACROBAT MZ.

COMPATIBILITY

The tank mixing behavior of this fungicide with other pesticides has not been fully investigated. If tank mixing with other pesticides is desirable, conduct a jar test with rates and volumes of carrier typically used in an agricultural application. Look for signs of separation, globules, sludge, flakes or other precipitates. DO NOT tank mix with the other pesticide if the jar test with ACROBAT MZ has indicated incompatibility.

GROUND APPLICATION

Maximum benefit of ACROBAT MZ from foliar applications requires thorough coverage inside and outside the plant canopy. To obtain thorough coverage of foliage, use proper spray pressure, a minimum of 20 gallons per acre, appropriate nozzles that provide uniform spray distribution and minimize drift, nozzle spacing and tractor speed.

AERIAL APPLICATION

Prior to aerial application, check the aircraft for uniformity of spray pattern, spray swath width and output. Use hollow cone or whirliplate nozzles. Point nozzles straight down or slightly backward. Uniformly apply with properly calibrated aerial equipment in 5 or more gallons of water per acre. If foliage is dense, use an output that will ensure optimum fungicide penetration. Spray swaths should be marked using flaggers who are in completely enclosed vehicles or by counting rows or by using some other marking device.

DO NOT apply when weather conditions favor drift.

CHEMIGATION USE DIRECTIONS

ACROBAT MZ can be applied prior to the onset of disease infection on a regular protectant spray schedule, not an irrigation schedule. Chemigation applications must be made on a 5-10 day spray schedule depending on disease severity. Chemigation applications may need to be supplemented with ground or aerial applications if irrigation cycles are less frequent than what is recommended on the label to obtain optimum control.

Apply ACROBAT MZ fungicide only through sprinkler irrigation systems including center-pivot, lateral move, side (wheel) roll, solid set, or hand move irrigation systems. DO NOT apply 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.

The irrigation system must be correctly calibrated (with water only) to ensure that the recommended rate of ACROBAT MZ is applied.

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. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional reduced-pressure zone (RPZ), backflow preventer or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

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 should have properly working nozzles providing the recommended output and pattern. The chemigation system should also be free of leaks.

Overhead Sprinkler Irrigation System Requirements

1. 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 back flow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located 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.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

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5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point that pesticide distribution is adversely affected.
 6. 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.
 7. DO NOT apply when wind speed favors drift beyond the area intended for treatment.

The following routine checks will help to ensure that the sprinkler irrigation system is working properly.

1. Use a calibrated injection metering pump as specified by the manufacturer.
2. Metering pumps, the supply tank, and any associated equipment must be clean and dry before adding diluted ACROBAT MZ to the system for injection.
3. Check the metering pump periodically to confirm that ACROBAT MZ is being injected continuously and at the proper calibration throughout the irrigation period.
4. Continuous agitation must be maintained in the supply tank during the entire overhead sprinkler irrigation period.

Center Pivot, and Lateral Move Irrigation Equipment

(Use only with electric or oil hydraulic drive systems which provide a uniform water distribution)

1. Determine size of area to be treated
2. Determine the time required to apply the least amount of water. No more than 0.2 inches of water should be applied over the area to be treated when the system and injection equipment are operated at normal pressures recommended by the equipment manufacturer's rated capacity.
3. Using only water, determine the injection pump output when operated at normal line pressure.
4. Determine the amount of ACROBAT MZ fungicide required to treat area.
5. Add the required amount of ACROBAT MZ fungicide and sufficient water to meet the injection time requirements of the solution tank.
6. Maintain constant solution tank agitation during the injection period.
7. Stop injection equipment after treatment is completed. Continue to operate the system until ACROBAT MZ fungicide solution has cleared the sprinkler head.

Solid-set, Side (wheel) Roll and Hand Move Irrigation Equipment:

1. Determine acreage covered by sprinkler.
2. Fill injector solution tank with water and adjust flow rate to use contents over a 10 to 30 minute interval.
3. Determine the amount of ACROBAT MZ fungicide required to treat the area.
4. Add the required amount of ACROBAT MZ fungicide into the same quantity of water used to calibrate the injection equipment.
5. Maintain constant solution tank agitation during the injection period.
6. Operate system at normal pressures recommended by the manufacturer of the injection equipment and use for the time interval established during calibration.
7. Inject ACROBAT MZ fungicide at the end of the irrigation cycle or as a separate application to maximize foliar fungicide retention.
8. Stop injection equipment after treatment is completed. Continue to operate the system until ACROBAT MZ fungicide solution has cleared the last sprinkler head.

ACROBAT MZ Use Directions For Potatoes

<u>Diseases Controlled</u>	<u>Rate Of ACROBAT MZ per Application</u>	<u>Directions For Use</u>	<u>Restrictions</u>
Late Blight	2.25 lb/acre	Begin applications when plants are 4-6 inches high or prior to the onset of disease infection. Apply 2.25 lb/acre of ACROBAT MZ and spray to runoff. Applications should be made on a 5-10 day spray schedule*.	DO NOT make more than 5 applications in any one season. DO NOT apply within 14 days of harvest in all states.

* Applications should be made on a 7-10 day schedule under low to moderate late blight pressure. However, when environmental conditions have been conducive for late blight, or when late blight has been detected within the field or nearby, or when under moderate to high late blight pressure, a 5-7 day schedule is recommended.

For optimum activity, ACROBAT MZ should not be applied if rainfall is expected within two hours of application.

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ROTATIONAL CROP GUIDELINES

The following rotational crops may be planted after applying ACROBAT MZ at the recommended rate:

1. Any time
Potatoes
2. Four months after ACROBAT MZ applications:
Leafy vegetables, such as head lettuce, leaf lettuce, spinach, and celery
Root crops, such as sugar beets, radish, and carrot
3. Twelve months after ACROBAT MZ applications:
All other crops

RECOMMENDATIONS

It is recommended that this product be used within an Integrated Pest Management Program. Also, vine-kill should occur 14 days before harvest.

ADDITIONAL RESTRICTIONS

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 one of the specified individual EBDC product maximum seasonal poundage of active ingredient allowed per acre.

Where EBDC Products Used Allow 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 Treatments with EBDC Products

In addition to the maximum number of foliar applications permitted by the formula stated above, a single application for seed treatment may be made on crops which have registered seed treatment uses. (NOTE: This product is not registered for seed treatment uses.)

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DISCLAIMER

The label instructions for the use of this product reflect the opinion of experts based on research and field use. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with 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 the use of, or application of the product contrary to label instructions, all of which are beyond the control of American Cyanamid Company. All such risks shall be assumed by the user.

American Cyanamid Company shall not be responsible for losses or damages resulting from use of this product in any manner not set forth on this label. User assumes all risks associated with the use of this product in any manner not specifically set forth on this label.

American Cyanamid Company warrants only that the material contained herein conforms to the chemical description on the label and is reasonably fit for the use therein described when used in accordance with the directions for use, subject to the risks referred to above.

CYANAMID DOES NOT MAKE OR AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED AND EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

BUYER'S EXCLUSIVE REMEDY AND AMERICAN CYANAMID'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF ACROBAT MZ. In no case shall Cyanamid or the seller be liable for consequential, special or indirect damages resulting from the use or handling of this product.

USES WITH OTHER PRODUCTS (TANK MIXES)

If this product is used in combination with any other product except as specifically recommended in writing by American Cyanamid Company, then American Cyanamid Company shall have no liability for any loss, damage, or injury arising out of its use in any such combination not so specifically recommended. If used in a combination recommended by American Cyanamid Company, the liability of American Cyanamid Company shall in no manner extend to any damage, loss or injury not directly caused by the inclusion of the American Cyanamid Company product in such combination use, and in any event shall be limited to return of the amount of the purchase price of the product.

ATTENTION: This product contains mancozeb and ETU, chemicals known to the State of California to cause cancer. ETU is also known to the State of California to cause birth defects or other reproductive harm.