

#### U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs Registration Division (7505P) 1200 Pennsylvania Ave., N.W. Washington, D.C. 20460

EPA Req. Number:

Date of Issuance:

241-383

MAR 2 6 2009

NOTICE OF PESTICIDE: Registration Reregistration

under FIFRA, as amended

Terms of Issuance: Unconditional

Name of Pesticide Product:

**ACROBAT MZ** FUNGICIDE

Name and Address of Registrant (include ZIP Code):

**BASF Corporation** 26 Davis Drive

Research Triangle Park, NC 27709

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by 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 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 motion, 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.

Based on your response to the mancozeb Reregistration Eligibility Document(s), EPA has reregistered the product listed above provided the following changes are made:

- 1. On page 4, move the second and third sentence, "Do not apply this product . . . See Chemigation Use Direction." To the General Use Information section on the next page.
- 2. On page 11, under rotational crops, convert the information into rows so that it is clear that leafy vegetables and root/tuber and bulb vegetables have a one month plant back interval and that peas, rice, sorghum, and soybeans have a seven month plant back interval.

The basic Confidential Statement of Formula (CSF) dated January 4, 2008, is acceptable and will be added to the product files. This CSF supersedes all CSFs previously accepted for this product.

Continued on page 2

Signature of Approving Official:

Date:

3/24/2009

Mary L. Waller, Product Manager (21) Fungicide Branch, Registration Division EPA Registration Number 241-383 Page 2

This action is taken under the authority of section 4(g)(2)(c) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended. Reregistration under this section does not eliminate the need for continual reassessment of pesticides. EPA may require submission of data at any time to maintain the registration of your product.

A copy of your label stamped "Accepted" is enclosed for your records.

Sincerely,

Mary L. Waller

Product Manager 21

Fungicide Branch

Registration Division (7505P)

Mary L. Waller

Enclosure



## ACCEPTED with COMMENTS In EPA Letter Dated

MAR 2 6 2009 Under the Federal Insecticide, Fundicide, and Rodenticide Act as amended, for the pesticide registered und walk A Reg. No.

## Acrobat® MZ fungicide

Wettable Powder

Active Ingredients: dimethomorph mancozeb Other Ingredients: Total:	60.0	0% 0%
EPA Reg. No. 241-383	EPA Est. No.	
U.S. Patent No. 5,952,496 and Re. 35,985		•

# 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.)

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

See inside for complete First Aid, Precautionary Statements, Directions For Use, and Conditions of Sale and Warranty.

#### **Net Contents:**

BASF Corporation 26 Davis Drive, Research Triangle Park, NC 27709

FIRS	T AID
If swallowed	<ul> <li>Call a poison control center or doctor immediately for treatment advice.</li> </ul>
	<ul> <li>Have a person sip a glass of water if able to swallow.</li> </ul>
	<ul> <li>DO NOT induce vomiting unless told to do so by a poison control center or doctor.</li> </ul>
	<ul> <li>DO NOT give anything by mouth to an unconscious person.</li> </ul>
If on skin or clothing	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> </ul>
	<ul> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
If in eyes	<ul> <li>Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes; then continue rinsing eyes.</li> </ul>
	<ul> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
If inhaled	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance; then give artificial</li> </ul>
	respiration, preferably mouth to mouth if possible.
	<ul> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>

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).

# 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. Wear long sleeved shirt, long pants, shoes, socks, and chemical-resistant gloves such as or made out of any waterproof material (selection **Category A**). 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)

Some materials that are chemical-resistant to this product are listed below. For more options, follow the instructions for **Category A** on an EPA chemical-resistance category-selection chart.

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#### Mixers, loaders, applicators, and other handlers must wear:

- Long-sleeved shirt
- Long pants
- Shoes and socks

In addition, all handlers except pilots, ground-boom applicators, and airblast applicators must wear:

- Chemical-resistant gloves made of any waterproof material
- A NIOSH-approved respirator with a dust/mist filter with MSHA/NIOSH approval number prefix TC-21C or any R, P, or HE filter.

See **Engineering Controls** for additional requirements.

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. Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them.

**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)]. Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

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.

#### **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.

#### **Environmental Hazards**

This pesticide is toxic to aquatic organisms. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. **DO NCT** 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 washwater or rinsate.

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#### **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 through any type of irrigation system unless the label instructions on chemigation are followed. See **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 the 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**.

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 soil or water, is:

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

#### Storage and Disposal

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

#### **Pesticide Storage**

Store in a cool, well-ventilated secure 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 (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.

#### **GENERAL INFORMATION**

THIS LABEL MUST BE IN THE POSSESSION OF THE USER AT THE TIME OF FUNGICIDE APPLICATION.

Acrobat® MZ fungicide can be used in a preventive spray program to manage late blight and tuber blight in potatoes. Dual and complementary modes of action provided by Acrobat MZ make it ideal for late blight and tuber blight management programs where fungicide rotation is emphasized to help prevent the development of disease resistance. It is recommended that this product be used within an Integrated Pest Management Program (IPM). Carefully read, and understand, and follow all directions and precautions. Disease pressure and environmental conditions will determine application rates and the length of the spray intervals. Consult local late blight advisory system recommendations to determine the predicted disease pressure and the associated application rates and intervals. 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.

#### **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. **DO NOT** tank mix with any product that has a prohibition for tank mixing. Follow the most restrictive labeling on this label or the tank mix partner.

#### **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.

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#### **AERIAL APPLICATION**

Prior to aerial application, check the aircraft for uniformity of spray pattern, spray swath width and output. Use hollow cone or whirl plate 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.

#### SPRAY DRIFT MANAGEMENT

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, and relative humidity) and method of application (e.g., ground, aerial, airblast, and 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 mancozeb. 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

- The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.
- 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.
- When applications are made with a crosswind, the swath must be displaced downwind. The applicator must compensate for this displacement at the upwind and downwind edge of the application area by adjusting the path of the aircraft upwind.

Additional requirements for ground boom application:

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

#### CHEMIGATION USE DIRECTIONS

Acrobat® MZ fungicide 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-day to 10-day spray schedule depending on disease pressure and environmental conditions. Consult local late blight advisory system recommendations to determine the predicted disease pressure and the associated application rates and intervals. Chemigation applications may need to be supplemented with ground or aerial applications if irrigation cycles are less frequent than what is specified on the label to obtain optimum control.

Apply **Acrobat MZ** 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 nonuniform distribution of treated water. If you have questions about calibration, contact state extension service specialists, equipment manufacturers or other experts.

The irrigation system must be correctly calibrated (with water only) to ensure that the specified 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 2 times 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 backflow.
- 2. The pesticide injection pipeline must contain a functional, automatic, quickclosing 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.
- 5. The irrigation line or water pump must include a functional pressure switch that 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.
- Metering pumps, the supply tank, and any associated equipment must be clean and dry before adding diluted **Acrobat<sup>®</sup> MZ fungicide** to the system for injection.
- 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 inch 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** required to treat area.
- 5. Add the required amount of **Acrobat MZ** and sufficient water to most the injection time requirements of the solution tank.
- 6. Maintain constant solution tank agitation during the injection perisque
- 7. Stop injection equipment after treatment is completed. Continue to operate the system until the **Acrobat MZ** 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-minute 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** 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** 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 the **Acrobat MZ** solution has cleared the last sprinkler head.

# Use Directions Control of Potato Late Blight Phytophthora infestans

Disease Pressure	Rate of <b>Acrobat<sup>®</sup> MZ fungicide</b> per acre per application based on spray interval		
	5-day interval (lbs)	7-day interval (lbs)	10-day interval (lbs)
Low	1.25	1.75	2.25
Moderate	1.75	2.25	Not labeled for this disease pressure and spray interval
High	2.25	2.25	Not labeled for this disease pressure and spray interval

Disease pressure and environmental conditions determine application rates and spray intervals. Consult local late blight advisory system recommendations to determine the predicted disease pressure and the associated application rates and intervals. Applications should begin prior to the onset of disease infection and be based on the recommendation of the local late blight advisory system. Apply **Acrobat MZ** to ensure spray runoff.

**DO NOT** exceed 2.25 lbs/acre/application and no more than 11.25 total lbs/acre in any 1 season.

DO NOT apply within 14 days of harvest in all states.

#### For Management of Tuber Blight Phytophthora infestans

When used according to label directions for late blight control, **Acrobat MZ** can also reduce tuber blight.

To maximize activity against tuber blight, begin fungicide applications before disease onset occurs and in accordance with local late blight advisory system recommendations. Also, maintain regular application schedules and obtain thorough plant coverage.

Acrobat MZ may be applied after vine kill. DO NOT apply within 14 days of harvest in all states. DO NOT apply any more than 2.25 lbs/acre/application and no more than 11.25 total lbs/acre in any 1 season.

#### **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, 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, the total poundage of all such EBDC products used must not exceed the lowest specified individual EBDC 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 or seed treatment may be made on crops that have registered seed treatment uses.

NOTE: Acrobat® MZ fungicide is not registered for seed treatment uses.

#### **ROTATIONAL CROP GUIDELINES**

After making the last **Acrobat MZ** application, rotational crops may be planted at the following intervals:

#### Any time

Potatoes

#### One month

Barley

Oats

Tobacco

Wheat

Brassica vegetables

such as broccoli, cabbage, and

cauliflower

#### Seven months

Alfalfa

Beans

Clover

Corn

#### Twelve months

All other crops

Leafy vegetables

such as head lettuce, leaf lettuce,

spinach, and celery

Root/tuber and bulb vegetables

such as carrot, onion, radish, and

sugar beet

Peas

Rice

Sorghum

Soybeans

#### **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, EXEMPLARY, 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.

### Uses With Other Products (Tank Mixes)

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

#### Acrobat is a registered trademark of BASF.

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000241-00383.20071214b.**NVA 2007-04-102-0194** Supersedes: NVA 2001-04-102-0108

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