



The Chemical Company

Group 7 11 Fungicide

SPECIMEN

# merivon<sup>®</sup>

XEMIMUM<sup>®</sup> BRAND FUNGICIDE

**For disease control and plant health in the following crops: pome fruits and stone fruits**

Powered by **Xemium<sup>®</sup>** and **F500<sup>®</sup>** fungicides

**Active Ingredients:**

fluxapyroxad*: 1 <i>H</i> -Pyrazole-4-carboxamide, 3-(difluoromethyl)-1-methyl-N-(3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)- . . . . .	21.26%
pyraclostrobin**: (carbamic acid, [2-[[[1-(4-chlorophenyl)-1 <i>H</i> -pyrazol-3-yl]oxy)methyl]phenyl]methoxy-, methyl ester) . . . . .	21.26%

**Other Ingredients:** . . . . . 57.48%

**Total:** . . . . . 100.00%

\*Equivalent to 2.09 pounds of fluxapyroxad per gallon.

\*\*Equivalent to 2.09 pounds of pyraclostrobin per gallon.

**EPA Reg. No. 7969-310**

**EPA Est. No.**

**KEEP OUT OF REACH OF CHILDREN**

## WARNING/AVISO

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, 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).**

**Shake Well Before Using**

### Net Contents:

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

## FIRST AID

<b>If swallowed</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• <b>DO NOT</b> induce vomiting unless told to do so by a poison control center or doctor.</li><li>• <b>DO NOT</b> give anything to an unconscious person.</li></ul>
<b>If inhaled</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth to mouth, if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>

## HOTLINE NUMBER

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

**WARNING.** May be fatal if swallowed. Harmful if inhaled. Avoid breathing spray mist.

### Personal Protective Equipment (PPE)

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

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves (such as natural rubber, nitrile, butyl, neoprene and/or barrier laminate)
- Shoes plus socks

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.

### Engineering Controls Statement

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

## 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. 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 may be hazardous to aquatic organisms in water adjacent to treated areas.

**DO NOT** apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow groundwater.

### Surface Water Advisory

This product is classified as having high potential for reaching aquatic sediment via runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of this active ingredient or its degradates from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecast to occur within 48 hours. Sound erosion control practices will reduce this product's potential to reach aquatic sediment via runoff.

### Groundwater Advisory

This chemical has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

## 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.

## 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), notification to workers, 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 **12 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 plus socks

## STORAGE AND DISPOSAL

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

### Pesticide Storage

Store in original containers only. Keep container closed when not in use. **DO NOT** store near food or feed.

### Pesticide Disposal

Wastes resulting from using this product may be disposed of on-site or at an approved waste disposal facility. If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representatives at the nearest EPA Regional Office for guidance.

### Container Handling

**Nonrefillable Container. DO NOT** reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

(continued)

## STORAGE AND DISPOSAL (continued)

### Container Handling (continued)

#### Triple rinse containers small enough to shake

**(capacity ≤ 5 gallons) as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

#### Triple rinse containers too large to shake (capacity > 5 gallons) as follows:

Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

**Pressure rinse as follows:** Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**Refillable Container.** Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

**Triple rinse as follows:** To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

## 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)

### Steps to be taken in case material is released or spilled:

- In case of spill on floor or paved surfaces, mop and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to label.
- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

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## Product Information

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This package contains **Merivon® Xemium® brand fungicide**, a suspension concentrate (SC) containing fluxapyroxad and pyraclostrobin. The active ingredients in **Merivon** belong to two classes of fungicides, the strobilurins or Quinone Outside Inhibitors (QoI) and succinate-dehydrogenase (SDH) inhibitor classes. To maximize disease control, apply **Merivon** in a regularly scheduled protective spray program and use in a rotation program with other fungicides.

Preventive applications optimize disease control, resulting in improved plant health.

Because of its high specific activity, **Merivon** has good residual activity against target fungi.

**Merivon** is not for use in greenhouse or transplant production.

### Modes of Action

Fluxapyroxad and pyraclostrobin, the active ingredients of **Merivon**, belong to the groups of respiration inhibitors classified by the U.S. EPA and Canada PMRA as target site of action **Group 7** and **Group 11** fungicides, respectively.

### Resistance Management

**Merivon** contains fluxapyroxad and pyraclostrobin, a pre-mix of a **Group 7** and a **Group 11** fungicide, and is effective against pathogens resistant to fungicides with modes of action different from those of target site **Group 7** and **Group 11**, such as dicarboximides, sterol inhibitors, benzimidazoles, or phenylamides. Fungal isolates resistant to **Group 7** or **11** fungicides may eventually dominate the fungal population if **Group 7** or **Group 11** fungicides are

used predominantly and repeatedly in the same field in successive years as the primary method of control for the targeted pathogen species, especially if resistance to either **Group 7** or **Group 11** fungicides is already present in the pathogen population. This may result in reduction of disease control by **Merivon** or other **Group 7** or **Group 11** fungicides. To maintain the performance of **Merivon** in the field, **DO NOT** exceed the specified number of consecutive applications of **Merivon** or the total number of applications of **Merivon** per season stated in **Table 1. Merivon® Xemium® brand fungicide Restrictions and Limitations Overview** and **Table 2. Merivon® Xemium® brand fungicide Crop-specific Directions**. Adhere to the label instructions regarding the consecutive use of **Merivon** or other target site of action **Group 7** and **Group 11** fungicides that have a similar site of action on the same pathogens.

### Resistance Management Advisory

The following recommendations may be considered to delay the development of fungicide resistance:

1. **Tank mixtures** - **Merivon** provides more effective resistance management of most of its target pathogens, because it is a pre-mix of two fungicides with different modes of action. If **Merivon** is used in tank mixtures with fungicides from different target site of action groups that are registered/permitted for the same use and that are effective against the pathogens of concern, use at least the minimum labeled rates of each fungicide in the tank mix.
2. **IPM** - Integrate **Merivon** into an overall disease and pest management program. Follow cultural practices known to reduce disease development. Consult your local extension specialist, crop advisor and/or BASF representative for additional IPM strategies established for your area. **Merivon** may be used in agricultural extension advisory (disease forecasting) programs, which recommend application timing based on environmental factors favorable for disease development.
3. **Monitoring** - Monitor efficacy of all fungicides used in the disease management program against the targeted pathogen and record other factors that may influence fungicide performance and/or disease development. If a **Group 7** or **Group 11** target site fungicide such as **Merivon** appears to be less or no longer effective against a pathogen that it previously controlled or suppressed, contact a BASF representative, local extension specialist, or crop advisor for further investigation.

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## Application Instructions

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Apply specified rates of **Merivon** as instructed in **Table 2. Merivon® Xemium® brand fungicide Crop-specific Directions**. Thorough coverage is best achieved by ground application; however, aerial applications can be made for those crops or in conditions where applications are not possible using ground equipment. **Merivon** can also be applied through sprinkler irrigation equipment. Application using drip irrigation equipment is permitted in select crops as instructed in **Table 2. Merivon® Xemium® brand fungicide**

**Crop-specific Directions.** Check equipment frequently for calibration.

Under low-level disease conditions, the minimum application rates can be used while maximum application rates and shortened spray schedules are recommended for severe or threatening disease conditions.

## Cleaning Spray Equipment

Spraying equipment must be cleaned thoroughly before and after applying this product, particularly if a product with potential to injure crops was used prior to **Merivon**.

**For containers 5 gallons or less, shake well prior to use. For containers greater than 5 gallons, recirculate prior to use.** Consult BASF Representatives for additional information regarding agitation and recirculation.

## Ground Application

Apply **Merivon** in sufficient water to ensure thorough coverage of foliage, bloom, and fruit. Thorough coverage is required for optimum disease control. Complete coverage of the stem, all the way down to the soil, is required for suppression of soilborne diseases of the stem.

### Instructions for Directed or Banded Crop Sprays

The application rates shown in **Table 1. Merivon® Xemium® brand fungicide Restrictions and Limitations Overview** and **Table 2. Merivon® Xemium® brand fungicide Crop-specific Directions** on this label reflect the amount of product to be applied uniformly over an acre of ground on a broadcast basis. In some crops, **Merivon** may be used as a directed or banded spray over the rows or plant beds with the alleys or row middles left unsprayed. For such uses, reduce the rate of **Merivon** in proportion to the area actually sprayed. Make this adjustment to avoid applying the product at use rates higher than permitted on this label.

The following formula may be used to determine the broadcast equivalent rate for doing directed or banded sprays:

$$\frac{\text{sprayed bed width} + \text{unsprayed row middle width}}{\text{total row width}}$$

$$\frac{\text{sprayed bed width in inches}}{\text{total row width in inches}} \times \frac{\text{broadcast rate}}{\text{treated acre}} = \frac{\text{band rate}}{\text{field acre}}$$

**Example:** A directed spray application will be made to 45-inch plant beds that are separated by 15 inches of unsprayed row middles.

$$45 \text{ inches sprayed bed width} + 15 \text{ inches unsprayed row middles} = 60 \text{ inches total row width}$$

The calculation to determine the appropriate equivalent rate of product to use for this situation based on a label broadcast rate of 4 fluid ounces product/acre follows:

$$\frac{45 \text{ inches sprayed bed width}}{60 \text{ inches total row width}} \times \frac{4 \text{ fl ozs Merivon}}{\text{treated acre}} = \frac{3 \text{ fl ozs Merivon}}{\text{field acre}}$$

## Aerial Application

**For aerial application in New York State, DO NOT apply within 100 feet of aquatic habitats (such as, but not limited to lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fishponds).**

For all crops listed in this label, aerial application can be made where applications are not possible using ground equipment. Thorough coverage is required to obtain optimum disease control. Avoid applications under conditions when uniform coverage cannot be obtained or when spray drift may occur. For aerial applications to tree crops, **DO NOT** use less than 10 gallons of spray solution per acre. The reduced spray volumes used in aerial applications may result in physical incompatibility, reduced disease control, or crop injury from **Merivon** applications, particularly when tank mixed with other products. Therefore, before making aerial applications test the spray on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a result of application.

## Spray Drift Management

**DO NOT** spray when conditions favor drift beyond area intended for application. Conditions that may contribute to drift include thermal inversion, wind speed and direction, spray nozzle/pressure combinations, spray droplet size, temperature/humidity, etc. Contact your state extension agent for spray drift prevention guidelines in your area. All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers. Avoiding spray drift at the application site is the responsibility of the applicator.

## Aerial Application Methods and Equipment

The interaction of many equipment-related and weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

**DO NOT** apply under circumstances where possible drift to unprotected persons, to food, forage, or other plantings that might be damaged, or crops thereof rendered unfit for sale, use or consumption can occur.

**DO NOT** release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety or special weather conditions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops.

1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the fixed wingspan or 90% of rotor blade diameter.
2. Nozzles must always point backward parallel with the air stream and never be pointed downward more than 45 degrees.

Where states have more stringent regulations, they must be observed.

### Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. Use the largest droplet size consistent with acceptable efficacy. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see **Wind**; **Temperature and Humidity**; and **Temperature Inversions**).

#### Controlling Droplet Size:

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure - DO NOT** exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** - Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is recommended practice unless inconsistent with product efficacy. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid-stream nozzles oriented straight back produce the largest droplets and the lowest drift.

### Wind

**DO NOT** apply at wind speeds greater than 15 mph. Drift potential is lowest when wind speed does not exceed 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided when wind speed is below 2 mph due to variable wind direction and high inversion potential. Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

### Temperature and Humidity

Low humidity and high temperatures increase the evaporation of spray droplets and, therefore, the likelihood of increased spray drift. Avoid spraying during conditions of low humidity and/or high temperatures. When making applications in low relative humidity, set up equipment to produce larger droplets in order to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

### Temperature Inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light, variable winds common during inversions.

Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

### Sensitive Areas

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. bodies of water or non-target crops) is minimal and when wind is blowing away from the sensitive areas.

### Directions for Use Through Irrigation Systems

#### Sprayer Preparation

Clean chemical tank and injector system thoroughly. Flush system with clean water.

#### Application Instructions

Apply **Merivon® Xemium® brand fungicide** at rates and timings as required in this label.

#### Use Precautions for Sprinkler Irrigation and Drip Irrigation Applications

- This product can be applied through sprinkler irrigation systems including center pivot, lateral move, end tow, side [wheel] roll, traveler, big gun, solid set, or hand move irrigation systems equipment. Application using drip irrigation is permitted in select crops as instructed in **Table 2. Merivon® Xemium® brand fungicide Crop-specific Directions**. **DO NOT** apply this product through any other type of irrigation system.
- Add **Merivon** to the pesticide supply tank containing sufficient water to maintain a continuous flow by the injection equipment. In continuous moving systems, inject this product-water mixture continuously, applying the labeled rate per acre for that crop. **DO NOT** exceed 1/2 inch (13,577 gallons) of water per acre. In stationary or noncontinuous moving systems, inject the product-water mixture in the last 15 to 30 minutes of each set allowing sufficient time for all of the required pesticide to be applied by all the sprinkler heads and applying the labeled rate per acre for that crop. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water. Thorough coverage of

foliage is required for good control. Maintain good agitation during the entire application period.

- Contact a state extension service specialist, equipment manufacturers or other experts for calibration questions.
- 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 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.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 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 where 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.
- Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. 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.
- **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.
- **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.

### Specific Instructions for Public Water Systems

1. 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.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) 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.

3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must 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.
5. 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.
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.

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## Additives and Tank Mixing Information

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**Merivon® Xemium® brand fungicide** can be tank mixed with recommended fungicides, insecticides, herbicides, liquid fertilizers, biological control products, adjuvants, and additives as specified in **Table 2. Merivon® Xemium® brand fungicide Crop-specific Directions**.

Under some conditions, the use of additives or adjuvants may improve the performance of **Merivon**. However, all varieties and cultivars have not been tested with possible tank mix combinations. Local conditions can also influence crop tolerance and may not match those under which BASF has conducted testing. Physical incompatibility, reduced disease control, or crop injury may result from mixing **Merivon** with other products. Therefore, before using any tank mix (fungicides, insecticides, herbicides, liquid fertilizers, biological control products, adjuvants, and additives), test the combination on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a result of application.

When an adjuvant is to be used with this product, BASF recommends the use of a Chemical Producers and Distributors Association certified adjuvant.

**Consult a BASF representative or local agricultural authorities for more information concerning additives.**

If tank mixtures are used, adhere to restrictions due to rates, label instructions and precautions on all labels.

### Compatibility Test for Tank Mix Components

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

1. **Water** - For 100 gallons per acre spray volume, use 16 cups (1 gallon) of water. For other spray volumes, adjust rates accordingly. Use only water from the intended source at the source temperature.

2. **Water-dispersible products** (dry flowables, wettable powders, suspension concentrates, or suspoemulsions) - Cap the jar and invert 10 cycles.
3. **Water-soluble products** - Cap the jar and invert 10 cycles.
4. **Emulsifiable concentrates** (oil concentrate or methylated seed oil when applicable) - Cap the jar and invert 10 cycles.
5. **Water-soluble additives** - Cap the jar and invert 10 cycles.
6. Let the solution stand for 15 minutes.
7. **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.

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### Mixing Order

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1. **Water** - Begin by agitating a thoroughly clean sprayer tank 3/4 full of clean water.
2. **Agitation** - Maintain constant agitation throughout mixing and application.
3. **Inductor** - If an inductor is used, rinse it thoroughly after each component has been added.
4. **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.
5. **Water-dispersible products** (such as dry flowables, wettable powders, suspension concentrates including **Merivon® Xemium® brand fungicide**, or suspo-emulsions) - **For containers 5 gallons or less, shake well prior to use. For containers greater than 5 gallons, recirculate prior to use.** Consult BASF Representatives for additional information regarding agitation and recirculation.
6. **Water-soluble products**
7. **Emulsifiable concentrates** (such as oil concentrates when applicable)
8. **Water-soluble additives** (such as ammonium sulfate [AMS] or urea ammonium nitrate [UAN] when applicable)
9. **Remaining quantity of water**

Make sure that each component is thoroughly mixed and suspended before adding tank mix partners. Maintain constant agitation during application. See **Table 2. Merivon® Xemium® brand fungicide Crop-specific Directions** for more details.

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### Restrictions and Limitations

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- **DO NOT** exceed the maximum seasonal use rate of product per acre, the maximum rate per application, or the total number of applications of **Merivon** per season as stated in **Table 1. Merivon® Xemium® brand fungicide Restrictions and Limitations Overview** and **Table 2. Merivon® Xemium® brand fungicide**

**Crop-specific Directions.** Preharvest interval (PHI) restrictions are also included in these tables.

- **DO NOT** use **Merivon** in greenhouse or transplant production.
- **For aerial application in New York State, DO NOT apply within 100 feet of aquatic habitats (such as, but not limited to lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fishponds).**
- **Crop Rotation Restriction - Barley, corn (all types), cotton, dried shelled peas and beans, edible-podded legume vegetables, fruiting vegetables (including tomato), oat, oilseed crops (including flax seed, rapeseed and sunflower), peanut, pome fruits, rye, sorghum, soybean, stone fruits, succulent shelled peas and beans, sugar beet, tuberous and corm vegetables (including potato), wheat and triticale** may be planted immediately following the last application. For rice, **DO NOT** plant sooner than 14 days after the last application. For all other crops, **DO NOT** plant sooner than 365 days after the last application.



**Table 1. Merivon® Xemium® brand fungicide Restrictions and Limitations Overview\***

Crop**	Minimum Time from Application to Harvest (PHI) (days)	Maximum Product Rate per Application (fl ozs/A)	Maximum Number of Applications per Season	Maximum Number of Consecutive Applications	Maximum Product Rate per Season (fl ozs/A)
Pome fruits	0	5.5	4	2	22
Stone fruits	0	6.7	3	2	20.1

\* See **Table 2. Merivon® Xemium® brand fungicide Crop-specific Directions** for additional directions.

\*\* For a complete list of crops within a crop group, see **Table 2. Merivon® Xemium® brand fungicide Crop-specific Directions**.

**Table 2. Merivon® Xemium® brand fungicide Crop-specific Directions**

Crop	Target Disease	Product Use Rate per Application (fl ozs/A)	Maximum Number of Applications per Season	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
<p><b>Pome fruits</b>                      Apple                      Crabapple                      Oriental pear                      Pear</p>	<p>Alternaria blotch  <i>(Alternaria mali)</i></p> <p>Apple scab  <i>(Venturia inaequalis)</i></p> <p>Bitter rot  <i>(Colletotrichum spp.)</i></p> <p>Black rot/Frogeye leaf spot  <i>(Botryosphaeria obtusa)</i></p> <p>Blue mold*  <i>(Penicillium spp.)</i></p> <p>Brooks spot  <i>(Mycosphaerella pomi)</i></p> <p>Flyspeck  <i>(Zygophiala jamaicensis)</i></p> <p>Gray mold rot*  <i>(Botrytis cinerea)</i></p> <p>Pear scab  <i>(Venturia pirina)</i></p> <p>Powdery mildew  <i>(Podosphaera leucotricha)</i></p> <p>Sooty blotch                      (disease complex)</p> <p>White rot  <i>(Botryosphaeria dothidea)</i></p> <p><b><u>Suppression only</u></b></p> <p>Cedar apple rust  <i>(Gymnosporangium juniperi-virginianae)</i></p> <p>Quince rust  <i>(Gymnosporangium clavipes)</i></p>	4 to 5.5	4	22	0

**Application Directions.** For scab, powdery mildew, frogeye leafspot and rust, begin applications of **Merivon** prior to disease development and continue on a 7 to 10 day interval.

For sooty blotch, flyspeck, white rot, black rot, bitter rot and Alternaria blotch, begin applications of **Merivon** prior to disease development and continue on a 7 to 14 day interval.

**Use of Adjuvants and Other Products as Mixes with Merivon.**

The use of adjuvants or additives may improve the performance of **Merivon** on pome fruits. However, under certain conditions, mixtures of **Merivon** with adjuvants, additives and/or other products may cause crop injury.

**DO NOT** use **Merivon** with:

- Emulsifiable concentrate (EC) or solvent-based formulation products
- Crop oil concentrate (COC), methylated seed oil (MSO) adjuvants

For **pears**, **DO NOT** use **Merivon** with horticultural mineral oil as crop response to foliage and/or fruit can occur under certain conditions.

(continued)

**Table 2. Merivon® Xemium® brand fungicide Crop-specific Directions** *(continued)*

**Application Directions** *(continued)*

BASF has not tested all varieties and cultivars with all possible tank mix combinations and rates of additives or adjuvants. Local environmental conditions also influence crop tolerance and may not match those under which BASF has conducted testing. Physical incompatibility, reduced disease control, crop injury, or incompatibility due to additives, adjuvants or other products used in combination with **Merivon** may result from mixing **Merivon** with other products. Refer also to the **Conditions of Sale and Warranty** section of this label.

To minimize the likelihood of crop injury, BASF recommends testing **Merivon** in combination with other products for crop safety on a small portion of the crop. However, environmental variability precludes direct and consistent projection of small area test results to future use.

Consult a BASF representative for more information concerning additives or adjuvants.

No restriction on livestock grazing or feeding.

For aerial application to pome fruit trees, use no less than 10 gallons of spray solution per acre.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** apply more than 22 fl ozs of **Merivon** per acre per season. **DO NOT** make more than two (2) consecutive applications of **Merivon** before alternating to a labeled fungicide with a different mode of action.

\*Not registered for use in California.

*(continued)*

**Table 2. Merivon® Xemium® brand fungicide Crop-specific Directions** *(continued)*

Crop	Target Disease	Product Use Rate per Application (fl ozs/A)	Maximum Number of Applications per Season	Maximum Product Rate per Season (fl ozs/A)	Minimum Time from Application to Harvest (PHI) (days)
<b>Stone fruits</b> Apricot Cherry (sweet and tart) Nectarine Peach Plum (all varieties) Prune	Alternaria leaf spot ( <i>Alternaria</i> spp.) Anthracnose ( <i>Colletotrichum</i> spp.) Blossom blight ( <i>Monilinia</i> spp.) Blue mold ( <i>Penicillium</i> spp.) Brown rot ( <i>Monilinia</i> spp.) Gray mold ( <i>Botrytis</i> spp.) Leaf spot ( <i>Blumeriella jaapii</i> ) Powdery mildew ( <i>Sphaerotheca</i> spp., <i>Podosphaera</i> spp.) Ripe fruit rot ( <i>Monilinia fruticola</i> , <i>Monilinia laxa</i> , <i>Botrytis cinerea</i> , <i>Rhizopus</i> spp.) Rust ( <i>Tranzschelia discolor</i> ) Scab ( <i>Cladosporium carpophilum</i> ) Shothole ( <i>Wilsonomyces carpophilus</i> )	4 to 6.7	3	20.1	0

**Application Directions.** For optimal disease control, begin application of **Merivon** at pink bud or prior to the onset of disease development and continue on a 7 to 14 day interval. Use the shorter interval and/or the higher rate when disease pressure is high.

**Use of Adjuvants and Other Products as Mixes with Merivon.**

The use of adjuvants or additives may improve the performance of **Merivon** on stone fruits. However, under certain conditions, mixtures of **Merivon** with adjuvants, additives and/or other products may cause crop injury, particularly to fruit within two weeks of harvest.

**Up to Two Weeks Before Harvest**

**Merivon** can be used with nonionic, organosilicone or **blended** MSO/OS (methylated seed oil/organosilicone) adjuvants.

**DO NOT** use **Merivon** with:

- Emulsifiable concentrate (EC) or solvent-based formulation products.
- Crop oil concentrate (COC), methylated seed oil (MSO) adjuvants.

*(continued)*

**Table 2. Merivon® Xemium® brand fungicide Crop-specific Directions** *(continued)*

**Application Directions** *(continued)*

**Within Two Weeks of Harvest**

**Merivon** can only be used with nonionic adjuvants that do not acidify and/or enhance penetration. **DO NOT** exceed 0.0625% (v/v) concentration when using these adjuvants.

**DO NOT** use **Merivon** with:

- Emulsifiable concentrate (EC) or solvent-based formulation products.
- Crop oil concentrate (COC), methylated seed oil (MSO), organosilicone (OS), MSO/OS blend adjuvants.
- Nonionic surfactant (NIS) adjuvant products that acidify or enhance plant penetration.

BASF has not tested all varieties and cultivars with all possible tank mix combinations and rates of additives or adjuvants. Local environmental conditions also influence crop tolerance and may not match those under which BASF has conducted testing. Physical incompatibility, reduced disease control, crop injury, or incompatibility due to additives, adjuvants or other products used in combination with **Merivon** may result from mixing **Merivon** with other products. Refer also to the **Conditions of Sale and Warranty** section of this label.

To minimize the likelihood of crop injury, BASF recommends testing **Merivon** in combination with other products for crop safety on a small portion of the crop. However, environmental variability precludes direct and consistent projection of small area test results to future use.

Consult a BASF representative for more information concerning additives or adjuvants.

For aerial application to stone fruit trees, use no less than 10 gallons of spray solution per acre.

**Resistance Management.** To limit the potential for development of resistance, **DO NOT** apply more than 20.1 fl ozs of **Merivon** per acre per season. **DO NOT** make more than two (2) consecutive applications of **Merivon** before alternating to a labeled fungicide with a different mode of action.

## 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.

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**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.

1108

**Merivon® Xemium® brand fungicide** is specially formulated and sold by BASF for the control of pests according to the directions on this label. The purchase price of **Merivon** includes a royalty whereby the purchaser acquires a prepaid license under U.S. Patent No. 5,438,070 and (pending No. 2008/0153707 A1) under which purchaser agrees to employ the purchased quantity of **Merivon** only for the above-specified uses under BASF's United States patent rights and to provide notice of the terms and conditions of this license to any subsequent purchaser. Uses of **Merivon** other than those specified on this label are not licensed through the purchase of this product and the use of this product for other purposes may violate this license and patent rights of BASF.

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