

7969-210

4-30-2008

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

APR 30 2008

Jeffrey D. Holmsen, Ph.D.  
Product Registration Manager  
BASF Corporation  
P.O. Box 13528  
Research Triangle Park, NC 27709

RE: Notification of Minor Label Change to Label  
EPA Registration Number: 7969-210  
Date of Submission: March 24, 2008

Dear Dr. Holmsen:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated March 24, 2008, for the product Cygnus Fungicide. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the actions requested fall within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, please call me directly at 703-305-6249 or Joyce Edwards of my staff at 703-308-5479.

Sincerely,

A handwritten signature in black ink, appearing to read "Linda Arrington".

Linda Arrington  
Notifications & Minor Formulations Team Leader  
Registration Division (7505P)  
Office of Pesticide Programs



United States  
Environmental Protection Agency  
Washington, DC 20460

<input type="checkbox"/>	Registration
<input type="checkbox"/>	Amendment
<input checked="" type="checkbox"/>	Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number 7969-124	2. EPA Product Manager Mary Waller	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) BASF Corporation / Cygnus Fungicide	PM# 21	
5. Name and Address of Applicant (Include ZIP Code) BASF Corporation P.O. Box 13528 Research Triangle Park, NC 27709 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to: <input checked="" type="checkbox"/> EPA Reg. No. _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Notification of label change per PR Notice 2007-4. This notification is consistent with the guidance in PR Notice 2007-4 and the requirements of EPA's regulations at 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156. No changes have been made to the Confidential Statement of Formula for this product. Minor label changes made are consistent with PR Notice 98-10. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if the amended label is not consistent with the requirements of 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input checked="" type="checkbox"/> Metal	<input type="checkbox"/> Plastic
* Certification must be submitted	If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt	<input type="checkbox"/> Glass	<input type="checkbox"/> Paper
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container	4. Size(s) Retail Container 1 pound		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product		
6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled				<input type="checkbox"/> Other _____	

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)			6. Date Application Received (Stamped)
Name Jeffrey D. Holmsen	Title Product Registration Manager	Telephone No. (include Area Code) 919-547-2039	
I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.			
2. Signature <i>Jeffrey D. Holmsen</i>	3. Title Product Registration Manager		
4. Typed Name Jeffrey D. Holmsen	5. Date March 24, 2008		

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GROUP 11 FUNGICIDE

# Cygnus<sup>®</sup>

Fungicide

For use on ornamentals in greenhouses, lath- and shade-houses, outdoor nurseries, retail nurseries and other nonresidential landscape areas.

**Active Ingredient:**

krésoxim-methyl (methyl (E)-2-methoxyimino-2-[2-(o-tolyloxymethyl)phenyl] acetate) ..... 50.0%

**Other Ingredients:** ..... 50.0%

**Total:** ..... 100.0%

EPA Reg No. 7969-124

EPA Est. No.

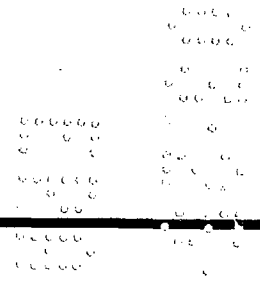
**KEEP OUT OF REACH OF CHILDREN.  
CAUTION/PRECAUCIÓN**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand 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 the attached booklet for complete **First Aid, Precautionary Statements, Directions For Use, Conditions of Sale and Warranty.**

**Net Contents:**



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

**BASF**  
The Chemical Company

<b>FIRST AID</b>	
<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 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<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 by mouth 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 mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>HOT LINE NUMBER</b>	
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**

Harmful if swallowed, inhaled, or absorbed through skin. Causes eye irritation. **DO NOT** get on skin, in eyes, or on clothing. Avoid breathing vapor or spray mist.

**Personal Protective Equipment (PPE) Applicators and other handlers must wear:**

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

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Follow the manufacturer's instructions for cleaning and maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**User Safety Recommendations**

**Users should:**

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing 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 freshwater and estuarine fish and invertebrates. **DO NOT** apply directly to water, areas where surface water is present, or intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment wash waters.

**Surface Water Advisory**

This chemical can contaminate surface water through spray drift. Under some conditions, it may also have a high potential for runoff into surface water (via both dissolution in runoff water and adsorption to eroding soil), for several days, post-application. These include poorly draining or wet soils with readily visible slopes towards adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and highly erodible soils cultivated using poor agricultural practices such as conventional tillage and down the slope plowing, and areas where an intense or sustained rainfall is forecasted to occur within 48 hours.

**Ground Water Advisory**

This chemical has properties and characteristics associated with chemicals detected in ground water. The use of this chemical in alkaline areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

**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 appli-

caution. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

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

<b>Agricultural Use Requirements</b>
<p>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.</p> <p><b>DO NOT</b> enter or allow worker entry into treated areas during the restricted-entry interval (REI) of <b>12 hours</b>.</p> <p>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:</p> <ul style="list-style-type: none"> <li>• Long-sleeved shirt and long pants</li> <li>• Chemical-resistant gloves made of any waterproof material</li> <li>• Shoes plus socks</li> </ul>

**Storage and Disposal**

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

**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 representative at the nearest EPA Regional Office for guidance.

**Container Disposal:**

**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.

**Triple rinse containers small enough to shake**

**(capacity ≤ 50 pounds) as follows:** Empty the remaining contents into application equipment or a mix tank. 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 > 50 pounds) 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. 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. 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.

**In Case of Spill**

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

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

Wear the personal protective equipment specified on the label. Recover the material for reuse according to label whenever possible. Sweep and/or shovel up the spilled material into an appropriate closed container. Avoid the creation of dusty conditions. Remove and wash clothing and personal protective equipment prior to reuse. Keep the spill out of all sewers and open bodies of water.

**I. General Information**

This package contains **Cygnus® fungicide**, a 50% water-dispersible granule (WG). **Cygnus** is a foliar fungicide that has protective, and curative activity against powdery mildews, and protective activity against certain leaf spots, rusts, anthracnoses and downy mildews. For best results against powdery mildews, leaf spots, rusts, anthracnoses and downy mildews, a protective barrier of **Cygnus** must be established and maintained on the plant surface (refer to **Table 1**).

**Mode of Action**

Kresoxim-methyl, the active ingredient in **Cygnus**, belongs to the group of respiration inhibitors classified by the U.S. EPA and Canada PMRA as Quinone Outside Inhibitors (QoI), or Target Site of Action **Group 11: Fungicides**.

**Crop Tolerance**

The phytotoxic potential of **Cygnus** has been assessed on a wide variety of common ornamental plants. Refer to **Table 2** for the list of plants shown to be tolerant to **Cygnus**. Refer to **Table 3** for those plants not tolerant to **Cygnus**.

Disposal language per PR NOTICE 2007-4

However, not all plant species and their varieties and cultivars have been tested for tolerance to **Cygnus® fungicide**. In addition, all possible tank mix combinations, sequential pesticide treatments, and adjuvants or surfactants have not been evaluated. Local conditions can also influence crop tolerance and may not match those under which BASF has conducted testing. Therefore, before using **Cygnus**, test the product on a sample of the crop to be treated to ensure that a phytotoxic response will not occur.

**Sensitive Crop Precaution**

**Cygnus** may cause injury to Asian pear of variety "Olympic" and certain sensitive sweet cherry varieties such as Angela, Chelan, Somerset, Sweetheart, Valera, Van, Vandalay, Vista, Cavalier, Coral Champagne, Emperor Francis, Royaltan, Schmidt, Summit, and Viva. Consult a BASF representative or local agricultural authorities for more information concerning additional cherry varieties that may be sensitive to **Cygnus**. Use special care when applying **Cygnus** to prevent contact with the sensitive plant species and varieties listed in **Table 3**. Avoid off-target movement.

**Cleaning Spray Equipment**

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

**Resistance Management**

**Cygnus** contains Kresoxim-methyl, a **Group 11** fungicide, and is effective against pathogens resistant to fungicides with modes of action different from those of QoI fungicides (Target site **Group 11**), such as, dicarboximides, sterol inhibitors, benzimidazoles, or phenylamides. Fungal isolates resistant to **Group 11** fungicides such as, kresoxim-methyl, azoxystrobin, trifloxystrobin, and pyraclostrobin, may eventually dominate the fungal population if **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. This may result in reduction of disease control by **Cygnus** or other **Group 11** fungicides.

To limit the potential for development of resistance to **Cygnus** and other **Group 11** fungicides:

- For outdoor use, **DO NOT** make more than six applications of **Cygnus** or other strobilurin fungicides per season.
- For use in greenhouses, **DO NOT** make more than eight applications of **Cygnus** or other strobilurin fungicides per year.
- For powdery mildew control, alternate each application of **Cygnus** with two sequential applications of labeled non-strobilurin fungicides with a different mode of action.
- For control of scab, leaf spots and rusts, **DO NOT** make more than two sequential applications of **Cygnus**. Then alternate to at least an equal number of sequential applications of labeled non-strobilurin fungicides with a different mode of action before applying **Cygnus** again.

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

1. **Tank mixtures:** Use 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. BASF recommends using at least the minimum labeled rates of each fungicide in the tank mix.
2. **IPM: Cygnus** should be integrated into an over all disease and pest management program. Cultural practices known to reduce disease development should be followed. Consult your local extension specialist, certified crop advisor and/or BASF representative for additional IPM strategies established for your area. **Cygnus** 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 11** target site fungicide, such as **Cygnus**, appears to be less effective against a pathogen that it previously controlled or suppressed, contact a BASF representative, local extension specialist, or certified crop advisor for further investigation.

Table 1. - Application Rates and Timings of Cygnus® fungicide		
Disease	Cygnus rate per 100 gallons	Directions for Use
<b>A. Scab</b> <i>Venturia inaequalis</i> <i>Venturia pirina</i>	1.0-1.6 ounces	Begin at bud break or when environmental conditions are favorable for disease development and continue on a 10-14 day interval.
<b>B. Powdery Mildews</b> <i>Erysiphe</i> sp. <i>Microsphaera</i> sp. <i>Oidium</i> sp. <i>Phyllactinia</i> sp. <i>Podosphaera</i> sp. <i>Sphaerotheca</i> sp. <i>Uncinula</i> sp.	1.6-3.2 ounces	Apply as a protective spray or at the first signs of disease. Continue on a 7-14 day interval. Applications made at the first signs of disease require shorter spray intervals. The addition of up to 0.06% of a non-organosilicone spreader-sticker type adjuvant may improve powdery mildew control.
<b>C. Leaf spots</b> <b>Rose black spot</b> <i>Diplocarpon rosae</i> <b>Leaf spots</b> <i>Alternaria</i> sp. <i>Blumeriella jaapii</i> <i>Didymellina</i> sp. <i>Drepanopeziza</i> sp. <i>Mycosphaerella</i> sp. <i>Phyllosticta</i> sp. <i>Septoria</i> sp.	1.6-3.2 ounces	Apply as a protective spray and continue on a 7-14 day interval.
<b>D. Rusts</b> <b>Carnation rust</b> <i>Puccinia dianthi</i> <b>Chrysanthemum rust</b> <i>Puccinia horiana</i> <b>Quince rust</b> <i>Gymnosporangium</i> sp. <b>Rose rust</b> <i>Phragmidium</i> sp. <b>Snapdragon rust</b> <i>Puccinia antirrhini</i>	3.2-6.4 ounces	Apply strictly as a protective spray and continue on a 7-10 day interval. The addition of up to 0.06% of a non-organosilicone spreader-sticker type adjuvant may improve rust control.
<b>E. Anthracnose</b> <i>Colletotrichum</i> sp.	3.2-6.4 ounces	Apply strictly as a protective spray and continue on a 7-10 day interval.
<b>F. Downy mildews</b> <b>Rose downy mildew</b> <i>Peronospora sparsa</i> <b>Snapdragon downy mildew</b> <i>Peronospora antirrhini</i>	3.2-6.4 ounces	Apply strictly as a protective spray and continue on a 7-10 day interval.

Table 2. - Plants Tolerant to Cygnus® fungicide. Plants in this table have been found to be tolerant to Cygnus when it is applied according to the use recommendations stated in this label. DO NOT use fruit from ornamental plants for food or feed purposes.

Host common name (Disease code letter refers to the 6 groups in Table 1.)	Scientific name
Ageratum (B)	<i>Ageratum houstonianum</i>
Alberta spruce	<i>Picea glauca</i> var. <i>albertiana</i>
Alstroemeria (C)	<i>Alstroemeria</i> sp.
Apple, nonbearing (A, B)	<i>Malus</i> sp.
Artichoke, ornamental (B)	<i>Cynara</i> sp.
Aster (B)	<i>Aster</i> sp.
Azalea (B)	<i>Rhododendron</i> sp.
Carnation (D)	<i>Dianthus</i> sp.
Cedar, Japanese	<i>Cryptomeria japonica</i>
Celosia (C)	<i>Celosia</i> sp.
Chrysanthemum (B, D)	<i>Chrysanthemum</i> sp.
Cherry, flowering – Kwanzan (B, C)	<i>Prunus serrulata</i> 'Kwanzan'
Cherry, flowering – Mt. Fuji (Shirotae) (B, C)	<i>Prunus serrulata</i> 'Mt. Fuji' (Shirotae)
Cherry, flowering – Shirofugen (B, C)	<i>Prunus serrulata</i> 'Shirofugen'
Cherry, flowering – Yoshino (B, C)	<i>Prunus yedoensis</i>
Cherry, flowering – Okame (B, C)	<i>Prunus</i> x 'Okame' ( <i>P. incisa</i> x <i>P. campulata</i> )
Cherry laurel, English (B)	<i>Prunus laurocerasus</i>
Cinquefoil (B)	<i>Potentilla fruticosa</i>
Citrus, nonbearing (B)	<i>Citrus</i> sp.
Clematis (B)	<i>Clematis</i> sp.
Columbine (B)	<i>Aquilegia</i> sp.
Crabapple, nonbearing (A, B)	<i>Malus</i> sp.
Currant (B, C)	<i>Ribes</i> sp.
Dahlia (B)	<i>Dahlia</i> sp.
Dogwood (B)	<i>Cornus</i> sp.
Dracaena	<i>Dracaena marginata</i>
Dusty miller (B, E)	<i>Centaurea cineraria</i>
Euonymus (B)	<i>Euonymus</i> sp.
Gazania (C)	<i>Gazania</i> sp.
Geranium (B)	<i>Pelargonium</i> sp.
Gerbera (B)	<i>Gerbera</i> sp.
Gladiolus (C)	<i>Gladiolus</i> sp.
Hawthorn - English (A, B, D)	<i>Crataegus</i> sp.
Hawthorn - Indian	<i>Rhaphiolepis</i> sp.
Honeysuckle (B)	<i>Lonicera</i> sp.
Hosta (C)	<i>Hosta</i> sp.
Hydrangea (B, C)	<i>Hydrangea</i> sp.
Impatiens (C)	<i>Impatiens</i> sp.
Iris (C)	<i>Iris</i> sp.
Juniper (C)	<i>Juniperus</i> sp.
Larkspur (B)	<i>Delphinium</i> sp.
Lilac (B)	<i>Syringa</i> sp.
Lily (C)	<i>Lilium</i> sp.
Limonium (C)	<i>Limonium</i> sp.
Live-forever (B)	<i>Hylotelephium (Sedum)</i> sp.
Loquat, nonbearing (A)	<i>Eriobotrya japonica</i>
Magnolia, Chinese (B)	<i>Magnolia soulangiana</i>
Maple - hedge, Norway sycamore, southern (B)	<i>Acer campestre</i> , <i>A. Platanoides</i> , <i>A. pseudoplatanus</i> , <i>A. barbatum</i>
Marigold (C)	<i>Tagetes</i> sp.
Monarda (B)	<i>Monarda</i> sp.
Oak - water, English, swamp chestnut (B)	<i>Quercus</i> sp. - <i>Q. nigra</i> , <i>Q. robur</i> , <i>Q. prinus</i>
Pansy (B)	<i>Viola</i> sp.
Peach/nectarine, nonbearing (B)	<i>Prunus persica</i>
Pear, nonbearing (A, B)	<i>Prunus</i> sp.
Petunia (C)	<i>Petunia</i> sp.
Phlox (B)	<i>Phlox</i> sp.
Plum, ornamental (B, C)	<i>Prunus</i> sp.
Poinsettia (B)	<i>Euphorbia pulcherrima</i>



**Table 2. - Plants Tolerant to Cygnus® fungicide (continued)**

Host common name (Disease code)	Scientific name
Portulaca (C)	<i>Portulaca</i> sp.
Rose (B, C, D, F)	<i>Rosa</i> sp.
Rosemary, ornamental (B)	<i>Rosmarinus officinalis</i> 'prostratus'
Serviceberry (B)	<i>Amelanchier ovalis</i> , <i>A. lamarckii</i>
Snapdragon (B, D, F)	<i>Antirrhinum</i> sp.
Sprenger asparagus (C)	<i>Asparagus densiflorus</i>
Spiderwort (C)	<i>Tradescantia</i> sp.
Spirea (B)	<i>Spiraea</i> sp.
Tick seed (B)	<i>Coreopsis</i> sp.
Tulip	<i>Tulipa</i> sp.
Verbena (B)	<i>Verbena</i> sp.
Veronica (B)	<i>Veronica</i> sp.
Viburnum (B)	<i>Viburnum</i> sp.
Vinca (C)	<i>Vinca</i> sp.
Yew (C)	<i>Taxus</i> sp.
Zinnia (B)	<i>Zinnia</i> sp.

**Table 3. - Plants Not Tolerant to Cygnus. (DO NOT expose these species or varieties to Cygnus)**

Common name	Scientific name
<b>Sweet cherry</b> Sensitive varieties: Angela, Chelan, Somerset, Sweetheart, Valera, Van, Vandalay, Cavalier, Coral Champagne, Emperor Francis, Royalton, Schmidt, Summit, Vista, Viva	<i>Prunus avium</i>
<b>Asian pear</b> Variety: Olympic	<i>Prunus</i> sp.

## II. APPLICATION INSTRUCTIONS

For the control of scab, apply 1.0-1.6 ounces of **Cygnus** per 100 gallons of water at 10-14 day intervals as a preventative treatment. Start applications at bud break or when environmental conditions are favorable for disease development. Use the higher rate of **Cygnus** when heavy infection pressure exists or is anticipated.

For the control of rose black spot and ornamental leaf spots, apply 1.6-3.2 ounces of **Cygnus** per 100 gallons of water at 7-14 day intervals as a preventative treatment.

For the control of powdery mildew, apply 1.6-3.2 ounces of **Cygnus** per 100 gallons of water as a preventative treatment or at the first signs of disease. Applications made at the first signs of powdery mildew will require higher rates and shorter spray intervals. The addition of up to 0.06% of a non-organosilicone spreader-sticker type adjuvant may improve powdery mildew control. **DO NOT** use organosilicone-based adjuvants with **Cygnus**.

For the control of rusts, anthracnose and downy mildew, apply **Cygnus** only as a preventative treatment at 3.2-6.4 oz per 100 gallons of water at 7-10 day intervals. The addition of up to 0.06% of a non-organosilicone spreader-sticker type adjuvant may improve rust control. **DO NOT** use organosilicone-based adjuvants with **Cygnus**.

Spray to the point of drip for all applications, making sure not to exceed the maximum seasonal use rate. Refer to **Table 1** for specific recommendations for disease control.

### Coverage

Apply the appropriate amount of spray solution to cover the foliage to the point of drip. Thorough coverage of all plant surfaces is required for optimum disease control.

## III. Additives

Additives or spray adjuvants are usually not necessary for use with **Cygnus**. The addition of up to 0.06% of a non-organosilicone spreader-sticker type adjuvant may improve spray coverage and control of certain diseases. **DO NOT use organosilicone-based adjuvants with Cygnus**, as crop phytotoxicity may result on certain ornamental species. Consult a BASF representative or local agricultural authorities for more information concerning additives.

## IV. General Tank Mixing Information

**Cygnus** may be tank mixed with most registered fungicides and insecticides. However, all varieties and cultivars have not been tested with possible tank mix combinations. Local conditions can influence crop tolerance and

may not match those under which BASF has conducted testing. Before using any tank mix (fungicides, insecticides, plant growth regulators, additives or spray adjuvants), 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 applications.

**Compatibility Test for Mix Components**

Before mixing components, always perform a compatibility jar test.

For 20 gallons per acre spray volume, use 3.3 cups (800 ml) of water. For other spray volumes, adjust rates accordingly. Only use water from the intended source at the source temperature.

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

Always cap the jar and invert 10 cycles between component additions:

When the components have all been added to the jar, let the solution stand for 15 minutes. 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. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is then compatible, use the compatibility agent as directed on its label. If the solution is still incompatible, **DO NOT** mix the ingredients in the same tank.

**Mixing Order**

- 1) **Water.** Begin by agitating a thoroughly clean sprayer tank three-quarters full of clean water.
- 2) **Agitation.** Maintain constant agitation throughout mixing and application.
- 3) **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 **Cygnus® fungicide**, dry flowables, wettable powders, suspension concentrates, or suspo-emulsions).
- 6) **Water-soluble products.**
- 7) **Emulsifiable concentrates** (oil concentrate when applicable).
- 8) **Water-soluble additives** (such as AMS or UAN when applicable).
- 9) **Remaining quantity of water.**

Maintain constant agitation during application.

**VI. General Restrictions and Limitations - Greenhouse Use**

- **DO NOT** make more than 8 applications of **Cygnus** per year.
- **Restricted-Entry Interval (REI): 12 hours.**
- **DO NOT** apply to crops subjected to stress conditions such as excessive heat, as crop injury may result.
- **DO NOT** apply to crops that show injury (leaf phytotoxicity or plant stunting) produced by prior pesticide applications, because this injury may be enhanced or prolonged.
- **DO NOT** apply this product as a smoke, mist, fog or aerosol.
- **DO NOT** apply through any type of irrigation equipment.
- **DO NOT** use fruit from ornamental plants for food or feed purposes.
- **Cygnus** is not for sale, distribution, or use in Nassau and Suffolk Counties in New York State.

**VII. General Restrictions and Limitations - Outdoor Use**

- **DO NOT** apply more than a total of 25.6 ounces (1.6 pounds) of **Cygnus** per acre per season.
- **Restricted-Entry Interval (REI): 12 hours.**
- **DO NOT** apply to crops subjected to stress conditions such as drought or widely fluctuating temperatures or excessive heat, as crop injury may result.
- **DO NOT** apply to crops that show injury (leaf phytotoxicity or plant stunting) produced by prior pesticide applications, because this injury may be enhanced or prolonged.
- **DO NOT** apply through any type of irrigation equipment.
- **DO NOT** use fruit from ornamental plants for food or feed purposes.
- **Cygnus** is not for sale, distribution, or use in Nassau and Suffolk Counties in New York State.

### 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.

*Language modified per EPA guidance*

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

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW,

BUYER'S EXCLUSIVE REMEDY AND BASF'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THE PRODUCT, TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF.

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Supersedes NVA 2006-04-072-0317

BASF Corporation  
26 Davis Drive  
Research Triangle Park, NC 27709



The Chemical Company

12/21

GROUP 11 FUNGICIDE

# Cygnus<sup>®</sup>

Fungicide

For use on ornamentals in greenhouses, lath- and shade-houses, outdoor nurseries, retail nurseries and other nonresidential landscape areas.

**Active Ingredient:**

kresoxim-methyl (methyl (E)-2-methoxyimino-2-[2-(o-tolyloxymethyl)phenyl] acetate) ..... 50.0%

**Other Ingredients:** ..... 50.0%

**Total:** ..... 100.0%

EPA Reg No. 7969-124

EPA Est. No.

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

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand 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 the attached booklet for complete **First Aid, Precautionary Statements, Directions For Use, Conditions of Sale and Warranty.**

**Net Contents:**

BASF Corporation  
26 Davis Drive  
Research Triangle Park, NC 27709

 **BASF**  
The Chemical Company

<b>FIRST AID</b>	
<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 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<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 by mouth 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 mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>HOT LINE NUMBER</b>	
<p>Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357)</p>	

**Precautionary Statements**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

Harmful if swallowed, inhaled, or absorbed through skin. Causes eye irritation. **DO NOT** get on skin, in eyes, or on clothing. Avoid breathing vapor or spray mist.

**Personal Protective Equipment (PPE)**

**Applicators and other handlers must wear:**

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

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Follow the manufacturer's instructions for cleaning and maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**User Safety Recommendations**

**Users should:**

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing 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 freshwater and estuarine fish and invertebrates. **DO NOT** apply directly to water, areas where surface water is present, or intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment wash waters.

**Surface Water Advisory**

This chemical can contaminate surface water through spray drift. Under some conditions, it may also have a high potential for runoff into surface water (via both dissolution in runoff water and adsorption to eroding soil), for several days, post-application. These include poorly draining or wet soils with readily visible slopes towards adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and highly erodible soils cultivated using poor agricultural practices such as conventional tillage and down the slope plowing, and areas where an intense or sustained rainfall is forecasted to occur within 48 hours.

**Ground Water Advisory**

This chemical has properties and characteristics associated with chemicals detected in ground water. The use of this chemical in alkaline areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

**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 appli-

caution. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

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

**Agricultural Use Requirements**

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

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

- Long-sleeved shirt and long pants
- 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 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 representative at the nearest EPA Regional Office for guidance.

**Container Disposal:**

**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.

**Triple rinse containers small enough to shake (capacity ≤ 50 pounds) as follows:** Empty the remaining contents into application equipment or a mix tank. 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 > 50 pounds) 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. 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. 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.

**In Case of Spill**

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

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

Wear the personal protective equipment specified on the label. Recover the material for reuse according to label whenever possible. Sweep and/or shovel up the spilled material into an appropriate closed container. Avoid the creation of dusty conditions. Remove and wash clothing and personal protective equipment prior to reuse. Keep the spill out of all sewers and open bodies of water.

**I. General Information**

This package contains **Cygnus® fungicide**, a 50% water-dispersible granule (WG). **Cygnus** is a foliar fungicide that has protective, and curative activity against powdery mildews, and protective activity against certain leaf spots, rusts, anthracnoses and downy mildews. For best results against powdery mildews, leaf spots, rusts, anthracnoses and downy mildews, a protective barrier of **Cygnus** must be established and maintained on the plant surface (refer to **Table 1**).

**Mode of Action**

Kresoxim-methyl, the active ingredient in **Cygnus**, belongs to the group of respiration inhibitors classified by the U.S. EPA and Canada PMRA as Quinone Outside Inhibitors (QoI), or Target Site of Action **Group 11: Fungicides**.

**Crop Tolerance**

The phytotoxic potential of **Cygnus** has been assessed on a wide variety of common ornamental plants. Refer to **Table 2** for the list of plants shown to be tolerant to **Cygnus**. Refer to **Table 3** for those plants not tolerant to **Cygnus**.

However, not all plant species and their varieties and cultivars have been tested for tolerance to **Cygnus® fungicide**. In addition, all possible tank mix combinations, sequential pesticide treatments, and adjuvants or surfactants have not been evaluated. Local conditions can also influence crop tolerance and may not match those under which BASF has conducted testing. Therefore, before using **Cygnus**, test the product on a sample of the crop to be treated to ensure that a phytotoxic response will not occur.

**Sensitive Crop Precaution**

**Cygnus** may cause injury to Asian pear of variety "Olympic" and certain sensitive sweet cherry varieties such as Angela, Chelan, Somerset, Sweetheart, Valera, Van, Vandalay, Vista, Cavalier, Coral Champagne, Emperor Francis, Royaltan, Schmidt, Summit, and Viva. Consult a BASF representative or local agricultural authorities for more information concerning additional cherry varieties that may be sensitive to **Cygnus**. Use special care when applying **Cygnus** to prevent contact with the sensitive plant species and varieties listed in **Table 3**. Avoid off-target movement.

**Cleaning Spray Equipment**

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

**Resistance Management**

**Cygnus** contains Kresoxim-methyl, a **Group 11** fungicide, and is effective against pathogens resistant to fungicides with modes of action different from those of QoI fungicides (Target site **Group 11**), such as, dicarboximides, sterol inhibitors, benzimidazoles, or phenylamides. Fungal isolates resistant to **Group 11** fungicides such as, kresoxim-methyl, azoxystrobin, trifloxystrobin, and pyraclostrobin, may eventually dominate the fungal population if **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. This may result in reduction of disease control by **Cygnus** or other **Group 11** fungicides.

To limit the potential for development of resistance to **Cygnus** and other **Group 11** fungicides:

- For outdoor use, **DO NOT** make more than six applications of **Cygnus** or other strobilurin fungicides per season.
- For use in greenhouses, **DO NOT** make more than eight applications of **Cygnus** or other strobilurin fungicides per year.
- For powdery mildew control, alternate each application of **Cygnus** with two sequential applications of labeled non-strobilurin fungicides with a different mode of action.
- For control of scab, leaf spots and rusts, **DO NOT** make more than two sequential applications of **Cygnus**. Then alternate to at least an equal number of sequential applications of labeled non-strobilurin fungicides with a different mode of action before applying **Cygnus** again.

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

- 1. Tank mixtures:** Use 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. BASF recommends using at least the minimum labeled rates of each fungicide in the tank mix.
- 2. IPM: Cygnus** should be integrated into an over all disease and pest management program. Cultural practices known to reduce disease development should be followed. Consult your local extension specialist, certified crop advisor and/or BASF representative for additional IPM strategies established for your area. **Cygnus** 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 11** target site fungicide, such as **Cygnus**, appears to be less effective against a pathogen that it previously controlled or suppressed, contact a BASF representative, local extension specialist, or certified crop advisor for further investigation.

Table 1. - Application Rates and Timings of Cygnus® fungicide		
Disease	Cygnus rate per 100 gallons	Directions for Use
<b>A. Scab</b> <i>Venturia inaequalis</i> <i>Venturia pirina</i>	1.0-1.6 ounces	Begin at bud break or when environmental conditions are favorable for disease development and continue on a 10-14 day interval.
<b>B. Powdery Mildews</b> <i>Erysiphe</i> sp. <i>Microsphaera</i> sp. <i>Oidium</i> sp. <i>Phyllactinia</i> sp. <i>Podosphaera</i> sp. <i>Sphaerotheca</i> sp. <i>Uncinula</i> sp.	1.6-3.2 ounces	Apply as a protective spray or at the first signs of disease. Continue on a 7-14 day interval. Applications made at the first signs of disease require shorter spray intervals. The addition of up to 0.06% of a non-organosilicone spreader-sticker type adjuvant may improve powdery mildew control.
<b>C. Leaf spots</b> <b>Rose black spot</b> <i>Diplocarpon rosae</i> <b>Leaf spots</b> <i>Alternaria</i> sp. <i>Blumeriella jaapii</i> <i>Didymellina</i> sp. <i>Drepanopeziza</i> sp. <i>Mycosphaerella</i> sp. <i>Phyllosticta</i> sp. <i>Septoria</i> sp.	1.6-3.2 ounces	Apply as a protective spray and continue on a 7-14 day interval.
<b>D. Rusts</b> <b>Carnation rust</b> <i>Puccinia dianthi</i> <b>Chrysanthemum rust</b> <i>Puccinia horiana</i> <b>Quince rust</b> <i>Gymnosporangium</i> sp. <b>Rose rust</b> <i>Phragmidium</i> sp. <b>Snapdragon rust</b> <i>Puccinia antirrhini</i>	3.2-6.4 ounces	Apply strictly as a protective spray and continue on a 7-10 day interval. The addition of up to 0.06% of a non-organosilicone spreader-sticker type adjuvant may improve rust control.
<b>E. Anthracnose</b> <i>Colletotrichum</i> sp.	3.2-6.4 ounces	Apply strictly as a protective spray and continue on a 7-10 day interval.
<b>F. Downy mildews</b> <b>Rose downy mildew</b> <i>Peronospora sparsa</i> <b>Snapdragon downy mildew</b> <i>Peronospora antirrhini</i>	3.2-6.4 ounces	Apply strictly as a protective spray and continue on a 7-10 day interval.



**Table 2. - Plants Tolerant to Cygnus® fungicide. Plants in this table have been found to be tolerant to Cygnus when it is applied according to the use recommendations stated in this label. DO NOT use fruit from ornamental plants for food or feed purposes.**

Host common name (Disease code letter refers to the 6 groups in Table 1.)	Scientific name
Ageratum (B)	<i>Ageratum houstonianum</i>
Alberta spruce	<i>Picea glauca</i> var. <i>albertiana</i>
Alstroemeria (C)	<i>Alstroemeria</i> sp.
Apple, nonbearing (A, B)	<i>Malus</i> sp.
Artichoke, ornamental (B)	<i>Cynara</i> sp.
Aster (B)	<i>Aster</i> sp.
Azalea (B)	<i>Rhododendron</i> sp.
Carnation (D)	<i>Dianthus</i> sp.
Cedar, Japanese	<i>Cryptomeria japonica</i>
Celosia (C)	<i>Celosia</i> sp.
Chrysanthemum (B, D)	<i>Chrysanthemum</i> sp.
Cherry, flowering – Kwanzan (B, C)	<i>Prunus serrulata</i> 'Kwanzan'
Cherry, flowering – Mt. Fuji (Shirotae) (B, C)	<i>Prunus serrulata</i> 'Mt. Fuji' (Shirotae)
Cherry, flowering – Shirofugen (B, C)	<i>Prunus serrulata</i> 'Shirofugen'
Cherry, flowering – Yoshino (B, C)	<i>Prunus yedoensis</i>
Cherry, flowering – Okame (B, C)	<i>Prunus</i> x 'Okame' ( <i>P. incisa</i> x <i>P. campulata</i> )
Cherry laurel, English (B)	<i>Prunus laurocerasus</i>
Cinquefoil (B)	<i>Potentilla fruticosa</i>
Citrus, nonbearing (B)	<i>Citrus</i> sp.
Clematis (B)	<i>Clematis</i> sp.
Columbine (B)	<i>Aquilegia</i> sp.
Crabapple, nonbearing (A, B)	<i>Malus</i> sp.
Currant (B, C)	<i>Ribes</i> sp.
Dahlia (B)	<i>Dahlia</i> sp.
Dogwood (B)	<i>Cornus</i> sp.
Dracaena	<i>Dracaena marginata</i>
Dusty miller (B, E)	<i>Centaurea cineraria</i>
Euonymus (B)	<i>Euonymus</i> sp.
Gazania (C)	<i>Gazania</i> sp.
Geranium (B)	<i>Pelargonium</i> sp.
Gerbera (B)	<i>Gerbera</i> sp.
Gladiolus (C)	<i>Gladiolus</i> sp.
Hawthorn - English (A, B, D)	<i>Crataegus</i> sp.
Hawthorn - Indian	<i>Rhaphiolepis</i> sp.
Honeysuckle (B)	<i>Lonicera</i> sp.
Hosta (C)	<i>Hosta</i> sp.
Hydrangea (B, C)	<i>Hydrangea</i> sp.
Impatiens (C)	<i>Impatiens</i> sp.
Iris (C)	<i>Iris</i> sp.
Juniper (C)	<i>Juniperus</i> sp.
Larkspur (B)	<i>Delphinium</i> sp.
Lilac (B)	<i>Syringa</i> sp.
Lily (C)	<i>Lilium</i> sp.
Limonium (C)	<i>Limonium</i> sp.
Live-forever (B)	<i>Hylotelephium</i> ( <i>Sedum</i> ) sp.
Loquat, nonbearing (A)	<i>Eriobotrya japonica</i>
Magnolia, Chinese (B)	<i>Magnolia soulangiana</i>
Maple - hedge, Norway , sycamore, southern (B)	<i>Acer campestre</i> , <i>A. Platanoides</i> , , <i>A. pseudoplatanus</i> , <i>A. barbatum</i>
Marigold (C)	<i>Tagetes</i> sp.
Monarda (B)	<i>Monarda</i> sp.
Oak - water, English, swamp chestnut (B)	<i>Quercus</i> sp. - <i>Q. nigra</i> , <i>Q. robur</i> , <i>Q. prinus</i>
Pansy (B)	<i>Viola</i> sp.
Peach/nectarine, nonbearing (B)	<i>Prunus persica</i>
Pear, nonbearing (A, B)	<i>Prunus</i> sp.
Petunia (C)	<i>Petunia</i> sp.
Phlox (B)	<i>Phlox</i> sp.
Plum, ornamental (B, C)	<i>Prunus</i> sp.
Poinsettia (B)	<i>Euphorbia pulcherrima</i>

**Table 2. - Plants Tolerant to Cygnus® fungicide (continued)**

Host common name (Disease code)	Scientific name
Portulaca (C)	<i>Portulaca</i> sp.
Rose (B, C, D, F)	<i>Rosa</i> sp.
Rosemary, ornamental (B)	<i>Rosmarinus officinalis 'prostratus'</i>
Serviceberry (B)	<i>Amelanchier ovalis, A. lamarckii</i>
Snaptadragon (B, D, F)	<i>Antirrhinum</i> sp.
Sprenger asparagus (C)	<i>Asparagus densiflorus</i>
Spiderwort (C)	<i>Tradescantia</i> sp.
Spiraea (B)	<i>Spiraea</i> sp.
Tick seed (B)	<i>Coreopsis</i> sp.
Tulip	<i>Tulipa</i> sp.
Verbena (B)	<i>Verbena</i> sp.
Veronica (B)	<i>Veronica</i> sp.
Viburnum (B)	<i>Viburnum</i> sp.
Vinca (C)	<i>Vinca</i> sp.
Yew (C)	<i>Taxus</i> sp.
Zinnia (B)	<i>Zinnia</i> sp.

**Table 3. - Plants Not Tolerant to Cygnus. (DO NOT expose these species or varieties to Cygnus)**

Common name	Scientific name
<b>Sweet cherry</b> Sensitive varieties: Angela, Chelan, Somerset, Sweetheart, Valera, Van, Vandalay, Cavalier, Coral Champagne, Emperor Francis, Royalton, Schmidt, Summit, Vista, Viva	<i>Prunus avium</i>
<b>Asian pear</b> Variety: Olympic	<i>Prunus</i> sp.

**II. APPLICATION INSTRUCTIONS**

For the control of scab, apply 1.0-1.6 ounces of **Cygnus** per 100 gallons of water at 10-14 day intervals as a preventative treatment. Start applications at bud break or when environmental conditions are favorable for disease development. Use the higher rate of **Cygnus** when heavy infection pressure exists or is anticipated.

For the control of rose black spot and ornamental leaf spots, apply 1.6-3.2 ounces of **Cygnus** per 100 gallons of water at 7-14 day intervals as a preventative treatment.

For the control of powdery mildew, apply 1.6-3.2 ounces of **Cygnus** per 100 gallons of water as a preventative treatment or at the first signs of disease. Applications made at the first signs of powdery mildew will require higher rates and shorter spray intervals. The addition of up to 0.06% of a non-organosilicone spreader-sticker type adjuvant may improve powdery mildew control. **DO NOT** use organosilicone-based adjuvants with **Cygnus**.

For the control of rusts, anthracnose and downy mildew, apply **Cygnus** only as a preventative treatment at 3.2-6.4 oz per 100 gallons of water at 7-10 day intervals. The addition of up to 0.06% of a non-organosilicone spreader-sticker type adjuvant may improve rust control. **DO NOT** use organosilicone-based adjuvants with **Cygnus**.

Spray to the point of drip for all applications, making sure not to exceed the maximum seasonal use rate. Refer to **Table 1** for specific recommendations for disease control.

**Coverage**

Apply the appropriate amount of spray solution to cover the foliage to the point of drip. Thorough coverage of all plant surfaces is required for optimum disease control.

**III. Additives**

Additives or spray adjuvants are usually not necessary for use with **Cygnus**. The addition of up to 0.06% of a non-organosilicone spreader-sticker type adjuvant may improve spray coverage and control of certain diseases. **DO NOT use organosilicone-based adjuvants with Cygnus**, as crop phytotoxicity may result on certain ornamental species. Consult a BASF representative or local agricultural authorities for more information concerning additives.

**IV. General Tank Mixing Information**

**Cygnus** may be tank mixed with most registered fungicides and insecticides. However, all varieties and cultivars have not been tested with possible tank mix combinations. Local conditions can influence crop tolerance and

may not match those under which BASF has conducted testing. Before using any tank mix (fungicides, insecticides, plant growth regulators, additives or spray adjuvants), 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 applications.

**Compatibility Test for Mix Components**

Before mixing components, always perform a compatibility jar test.

For 20 gallons per acre spray volume, use 3.3 cups (800 ml) of water. For other spray volumes, adjust rates accordingly. Only use water from the intended source at the source temperature.

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

Always cap the jar and invert 10 cycles between component additions.

When the components have all been added to the jar, let the solution stand for 15 minutes. 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. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is then compatible, use the compatibility agent as directed on its label. If the solution is still incompatible, **DO NOT** mix the ingredients in the same tank.

**Mixing Order**

- 1) **Water.** Begin by agitating a thoroughly clean sprayer tank three-quarters full of clean water.
- 2) **Agitation.** Maintain constant agitation throughout mixing and application.
- 3) **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 **Cygnus® fungicide**, dry flowables, wettable powders, suspension concentrates, or suspo-emulsions).
- 6) **Water-soluble products.**
- 7) **Emulsifiable concentrates** (oil concentrate when applicable).
- 8) **Water-soluble additives** (such as AMS or UAN when applicable).
- 9) **Remaining quantity of water.**

Maintain constant agitation during application.

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**VI. General Restrictions and Limitations - Greenhouse Use**

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- **DO NOT** make more than 8 applications of **Cygnus** per year.
- **Restricted-Entry Interval (REI): 12 hours.**
- **DO NOT** apply to crops subjected to stress conditions such as excessive heat; as crop injury may result.
- **DO NOT** apply to crops that show injury (leaf phytotoxicity or plant stunting) produced by prior pesticide applications, because this injury may be enhanced or prolonged.
- **DO NOT** apply this product as a smoke, mist, fog or aerosol.
- **DO NOT** apply through any type of irrigation equipment.
- **DO NOT** use fruit from ornamental plants for food or feed purposes.
- **Cygnus** is not for sale, distribution, or use in Nassau and Suffolk Counties in New York State.

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**VII. General Restrictions and Limitations - Outdoor Use**

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- **DO NOT** apply more than a total of 25.6 ounces (1.6 pounds) of **Cygnus** per acre per season.
- **Restricted-Entry Interval (REI): 12 hours.**
- **DO NOT** apply to crops subjected to stress conditions such as drought or widely fluctuating temperatures or excessive heat, as crop injury may result.
- **DO NOT** apply to crops that show injury (leaf phytotoxicity or plant stunting) produced by prior pesticide applications, because this injury may be enhanced or prolonged.
- **DO NOT** apply through any type of irrigation equipment.
- **DO NOT** use fruit from ornamental plants for food or feed purposes.
- **Cygnus** is not for sale, distribution, or use in Nassau and Suffolk Counties in New York State.

**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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