



**City of Santa Barbara**  
Parks and Recreation Department

**Memorandum**

**DATE:** August 13, 2014  
**TO:** IPM Advisory Committee  
**FROM:** Simon Herrera, Golf Course Superintendent  
**SUBJECT:** Material Exemption Request for FY 2015

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The City of Santa Barbara Parks and Recreation Department, Golf Division is requesting that the IPM Advisory Committee approve the attached list of materials for exemption. The request for the materials listed has not changed from FY 14 and the technical information is current. The golf course staff will only use these products when accepted thresholds are exceeded and all alternative options have been exhausted.

Below is the list of materials that the Golf Division is requesting for FY 15.

- Primo Maxx
- Acelepryn
- Affirm
- Proxy
- Fore
- Insignia

Thank you very much for your consideration.



City of Santa Barbara  
MATERIAL EXEMPTION REQUEST FOR PESTICIDE APPLICATION

City Parks and Recreation IPM Coordinator SANTOS ESCOBAR Phone 864-546-4  
Pesticide Applicator (employee or company) Name City Park and Recreation staff Phone 864-5547  
Application Site GOLF COURSE Specific Location GREENS  
Date(s) AS NEEDED  
Product Name PRIMO MAXX Active Ingredient TRINEXAPAC - ETHYL  
Number of Applications:  One-time  Other  
Type:  Emergency  Trial  Programmatic  Other

Product type:  Herbicide  Insecticide  Fungicide  Other GROWTH REGULATOR  
Application:  Ornamental  Turf  Golf  Vector Control  Park Tree  Street Tree  
 Right of Way  Vertebrate pest  Other  
Is the pesticide on the Tiered Materials List?  No  Yes  
If yes, provide the Tier 4

If the pesticide is not on the Tiered Materials List, provide the following screening information. See the IPM Strategy and the Tiered Materials List for instructions on screening the pesticide.  
EPA Reg # \_\_\_\_\_ Signal \_\_\_\_\_ Estimated Tier \_\_\_\_\_  
Restricted  No  Yes/Describe \_\_\_\_\_  
P Waste \_\_\_\_\_ PBT \_\_\_\_\_ WA PBT \_\_\_\_\_ Persistant \_\_\_\_\_ Mobil \_\_\_\_\_  
Cancer \_\_\_\_\_ Repro \_\_\_\_\_ Neuro \_\_\_\_\_ Endocrine \_\_\_\_\_  
Bird \_\_\_\_\_ Fish \_\_\_\_\_ Bees \_\_\_\_\_ Wildlife \_\_\_\_\_

Attach product label and MSDS to this form.

Describe the pest problem.  
EXCESSIVE VERTICAL GROWTH OF CREEPING BENTGRASS

Describe the management goals and objectives for this site.  
ENCOURAGE LATERAL GROWTH OF TURFGRASS CREATING MORE LEAF TISSUE WHICH WILL LEAD TO A MORE ESTABLISHED ROOT SYSTEM AND MORE QUICK

What is the damage threshold for this pest at this site?  
NO THRESHOLD

Describe the monitoring of the pest and potential predators that was conducted and the control methods previously used at the site.  
N/A

Describe how the product would be applied including frequency, concentration, and method of application.  
THE PRODUCT WOULD BE APPLIED ON A BI-WEEKLY BASIS @ 1 - .125 OZ/M<sup>2</sup> USING A SPREADER

What non-target impacts are anticipated?  
NONE

How does the use of this product help achieve the site management goals? Note if this is curative or preventative.  
USING THIS PRODUCT WILL FORCE THE CREEPING BENTGRASS TO MOVE LATERALLY ALLOWING IT TO OUT COMPETE THE POA ABOVE AT A MORE RAPID RATE.

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MATERIAL EXEMPTION REQUEST FOR PESTICIDE APPLICATION

How will the effectiveness of this product be monitored? Include expected results and indicators of success.

AFTER APPLICATION SOIL IS MONITORED FOR BTB POPULATIONS. EXPECTED RESULTS ARE A COMPLETE REDUCTION IN BTB POPULATIONS.

Describe site conditions, for example consider the following: restricted access, distance from a creek or body of water, degree of runoff, site is a pesticide-free zone, etc.

NONE

List alternatives considered, alternatives implemented and why they were eliminated.

THIS IS THE SAFEST MOST EFFECTIVE PRODUCT IN THE MARKET.

Justification: describe why is applying this pesticide is the best solution and why a less-hazardous chemical, non-chemical option or taking no action is not feasible.

THIS IS A GREEN PRODUCT W/NO HEALTH CONCERNS.

Was outside expertise utilized?  No  Yes / Describe

THIS PRODUCT WAS SUGGESTED BY A LOCAL SUPERINTENDENT.

Describe future plans to prevent using the chemical again.

WILL USE EACH SPRING TO CONTROL BTB GRUBS. THIS IS THE SAFEST PRODUCT MONEY CAN BUY.

Signatures \_\_\_\_\_

Department IPM Coordinator

City IPM Coordinator

Completed by the City of Santa Barbara Staff IPM Committee

Vote Tally \_\_\_\_\_ Disposition:  Approved  Denied/Reason \_\_\_\_\_

If approved, follow the attached best management practices.

Comments:

Completed by the IPM Advisory Committee

Vote Tally \_\_\_\_\_ Disposition:  Approved  Denied/Reason \_\_\_\_\_

If approved, follow the attached best management practices.

Comments:

City of Santa Barbara  
MATERIAL EXEMPTION REQUEST FOR PESTICIDE APPLICATION

Dept Parks and Recreation IPM Coordinator SANTOS ESCOBAR Phone 564-6464

Pesticide Applicator (employee or company) Name City Park and Recreation staff Phone 564-5547 SILVIA REE

Application Site GOLF COURSE Specific Location GREENS

Date(s) SPRING

Product Name ACELEPRYN Active Ingredient CHLORANTHANILIPROLE

Number of Applications:  One-time  Other \_\_\_\_\_

Type:  Emergency  Trial  Programmatic  Other \_\_\_\_\_

Product type:  Herbicide  Insecticide  Fungicide  Other \_\_\_\_\_

Application:  Ornamental  Turf  Golf  Vector Control  Park Tree  Street Tree  
 Right of Way  Vertebrate pest  Other \_\_\_\_\_

Is the pesticide on the Tiered Materials List?  No  Yes  
If yes, provide the Tier \_\_\_\_\_

If the pesticide is not on the Tiered Materials List, provide the following screening information. See the IPM Strategy and the Tiered Materials List for instructions on screening the pesticide.

EPA Reg # 352-731 Signal NONE Estimated Tier 4+

Restricted  No  Yes/Describe \_\_\_\_\_

P Waste \_\_\_\_\_ PBT \_\_\_\_\_ WA PBT \_\_\_\_\_ Persistant \_\_\_\_\_ Mobil \_\_\_\_\_

Cancer NONE Repro NONE Neuro NONE Endocrine NONE

Bird NONE Fish NONE Bees NONE Wildlife NONE

Attach product label and MSDS to this form.

Describe the pest problem.

BLACK TURFGRASS NTAENIUS GRUBS FEED ON ROOT SYSTEM OF TURF

Describe the management goals and objectives for this site.

CONTROL BTA GRUBS

What is the damage threshold for this pest at this site?

LOW

Describe the monitoring of the pest and potential predators that was conducted and the control methods previously used at the site.

MONITOR GREENS IN MID-LATE SPRING ~~WINTER~~ FOR BTA GRUBS BY REMOVING SOIL PLUGS.

Describe how the product would be applied including frequency, concentration, and method of application.

PRODUCT WOULD BE APPLIED IN SPRING (LATE APRIL) AT FIRST SIGN OF JUVENILE BTA GRUBS. IT WOULD BE APPLIED @ .367 OZ/M<sup>2</sup> WITH A SPRAYER.

What non-target impacts are anticipated?

NONE

How does the use of this product help achieve the site management goals? Note if this is curative or preventative. THIS IS A GREEN PRODUCT WITH NO ADVERSE EFFECTS TO WILDLIFE, HUMANS, BEES ETC...

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How will the effectiveness of this product be monitored? Include expected results and indicators of success.  
*GREENS WILL BE MONITORED AFTER APPLICATION ON A DAILY BASIS. IMPROVED PLANT HEALTH AND A REDUCTION IN DISEASE PRESSURE ARE THE EXPECTED RESULTS.*

Describe site conditions, for example consider the following: restricted access, distance from a creek or body of water, degree of runoff, site is a pesticide-free zone, etc.

*PUTTING GREENS, NON PHAER ZONE, NO RUNOFF CONCERNS.*

List alternatives considered, alternatives implemented and why they were eliminated.

*ROLLING GREENS INSTEAD OF MOWING TO REDUCE STRESS. RAISING THE HEIGHT OF CUT TO REDUCE PRESSURE. SPIKES AND SEEDING AREAS THAT HAVE BEEN MOST AFFECTED BY DISEASE.*

Justification: describe why is applying this pesticide is the best solution and why a less-hazardous chemical, non-chemical option or taking no action is not feasible. APPLYING THIS PESTICIDE WOULD BE AS A LAST MEASURE. THIS

*PRODUCT IS A TIER 4 FUNGICIDE WHICH MAKES IT SAFER THAN OTHERS IN THE MARKET. NON-CHEMICAL OPTIONS ARE IMPLEMENTED UNTIL PRESSURE IS TOO GREAT.*

Was outside expertise utilized?  No  Yes / Describe  
*LOCAL SUPERINTENDENTS HAVE CONSULTED WITH ADVICE AND EXPERIENCE CONTROLLING DISEASES*

Describe future plans to prevent using the chemical again.

*INCREASING BENTGRASS POPULATIONS WILL ELIMINATE THE NEED FOR THIS PRODUCT ON POC AREA*

Signatures \_\_\_\_\_

Department IPM Coordinator

City IPM Coordinator

Completed by the City of Santa Barbara Staff IPM Committee

Vote Tally \_\_\_\_\_ Disposition:  Approved  Denied/Reason \_\_\_\_\_

If approved, follow the attached best management practices.

Comments:

Completed by the IPM Advisory Committee

Vote Tally \_\_\_\_\_ Disposition:  Approved  Denied/Reason \_\_\_\_\_

If approved, follow the attached best management practices.

Comments:

City of Santa Barbara  
MATERIAL EXEMPTION REQUEST FOR PESTICIDE APPLICATION

Dept Parks and Recreation IPM Coordinator SANTOS ESCOBAR Phone 564-5464

Pesticide Applicator (employee or company) Name City Park and Recreation staff Phone 564-5547

Application Site GOLF COURSE Specific Location GREENS

Date(s) AS NEEDED

Product Name AFFIRM Active Ingredient POLYOXIN-D ZINC SALT (Bio-Pesticide)

Number of Applications:  One-time  Other \_\_\_\_\_  
Type:  Emergency  Trial  Programmatic  Other

Product type:  Herbicide  Insecticide  Fungicide  Other \_\_\_\_\_  
Application:  Ornamental  Turf  Golf  Vector Control  Park Tree  Street Tree  
 Right of Way  Vertebrate pest  Other \_\_\_\_\_

Is the pesticide on the Tiered Materials List?  No  Yes  
If yes, provide the Tier \_\_\_\_\_  
If the pesticide is not on the Tiered Materials List, provide the following screening information. See the IPM Strategy and the Tiered Materials List for instructions on screening the pesticide.

EPA Reg # 68173-3-1001 Signal CAUTION Estimated Tier 4  
Restricted  No  Yes/Describe \_\_\_\_\_  
P Waste \_\_\_\_\_ PBT \_\_\_\_\_ WA PBT \_\_\_\_\_ Persistent NO Mobil NO  
Cancer NO Repro NO Neuro NO Endocrine NO  
Bird NO Fish POSSIBLE Bees NO Wildlife NO

Attach product label and MSDS to this form.

Describe the pest problem.  
ANTHRACNOSE, FAIRY RING

Describe the management goals and objectives for this site.  
BALANCED FERTILITY AND WATER MANAGEMENT. PROMOTION OF CREEPING BENTGRASS POPULATION WHICH ARE RESISTANT TO ANTHRACNOSE.

What is the damage threshold for this pest at this site?  
FAIRY RING - MODERATE ANTHRACNOSE - MINIMAL

Describe the monitoring of the pest and potential predators that was conducted and the control methods previously used at the site.  
GREENS ARE MONITORED EVERY DAY AND WEATHER PATTERNS ARE MONITORED (FOG, RAIN, HUMIDITY)

Describe how the product would be applied including frequency, concentration, and method of application.  
WOULD BE APPLIED AS A CURATIVE APPLICATION WHEN THRESHOLDS ARE MET OR EXCEEDED. .009 - .018 OZ/acre SPRAYER

What non-target impacts are anticipated?  
NONE

How does the use of this product help achieve the site management goals? Note if this is curative or preventative.  
WILL HELP WITH CONTROL OF ANTHRACNOSE AND FAIRY RING. THIS IS A BIO-PESTICIDE HELPING US ACHIEVE OUR GOAL OF USING LESS TOXIC PRODUCTS. THIS WOULD BE USED AS A CURATIVE

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MATERIAL EXEMPTION REQUEST FOR PESTICIDE APPLICATION

How will the effectiveness of this product be monitored? Include expected results and indicators of success.  
DISEASE PRESSURE WILL BE MONITORED DAILY AFTER APPLICATION. PERFORMANCE EXPECTED TO  
WOULD BE THE CONTROL OF POTENTIALS AND IMPROVED PLANT HEALTH.  
Describe site conditions, for example consider the following: restricted access, distance from a creek or body of  
water, degree of runoff, site is a pesticide-free zone, etc.  
LIMITED CHANNEL FOR RUNOFF. PRODUCT WILL BE WATERED IN FOR 3-5 MINUTES.

List alternatives considered, alternatives implemented and why they were eliminated.  
DEW REMOVAL EACH MORNING, MANN ROLLING INSTEAD OF SPRAYING. THESE ALTERNATIVES DID NOT  
ELIMINATED BUT AS APPLICATION IS SOMETIMES NECESSARY DUE TO DISEASE PRESSURE.  
Justification: Describe why is applying this pesticide is the best solution and why a less-hazardous chemical, non-  
chemical option or taking no action is not feasible.

THIS PESTICIDE IS LESS TOXIC THAN MOST. NOT TAKING ACTION WILL LEAD TO SEVERE DAMAGE TO THE  
GREENS AFFECTING PATRONAGE & REVENUE.  
Was outside expertise utilized?  No  Yes / Describe  
LEGAL SUPERINTENDENTS HAVE BEEN CONSULTED FOR ADVICE.

Describe future plans to prevent using the chemical again.  
A MONITORING OF BENEFITS WILL ELIMINATE THE NEED FOR FURTHER APPLICATIONS.

Signatures \_\_\_\_\_  
Department IPM Coordinator \_\_\_\_\_ City IPM Coordinator \_\_\_\_\_

Completed by the City of Santa Barbara Staff IPM Committee

Vote Tally \_\_\_\_\_ Disposition:  Approved  Denied/Reason \_\_\_\_\_

If approved, follow the attached best management practices.

Comments:

Completed by the IPM Advisory Committee

Vote Tally \_\_\_\_\_ Disposition:  Approved  Denied/Reason \_\_\_\_\_

If approved, follow the attached best management practices.

Comments:

City of Santa Barbara  
MATERIAL EXEMPTION REQUEST FOR PESTICIDE APPLICATION

Dept Parks and Recreation IPM Coordinator SANTOS ESCOBAR Phone 564-5464

Pesticide Applicator (employee or company) Name City Park and Recreation staff Phone 564-5547 SIMON HEER

Application Site GOLF COURSE Specific Location GREENS

Date(s) WINTER / SPRING

Product Name PRAXY Active Ingredient \_\_\_\_\_

Number of Applications:  One-time  Other \_\_\_\_\_  
Type:  Emergency  Trial  Programmatic  Other

Product type:  Herbicide  Insecticide  Fungicide  Other GROWTH REGULATOR

Application:  Ornamental  Turf  Golf  Vector Control  Park Tree  Street Tree  
 Right of Way  Vertebrate pest  Other \_\_\_\_\_

Is the pesticide on the Tiered Materials List?  No  Yes If yes, provide the Tier \_\_\_\_\_  
If the pesticide is not on the Tiered Materials List, provide the following screening information. See the IPM Strategy and the Tiered Materials List for instructions on screening the pesticide.

EPA Reg # \_\_\_\_\_ Signal \_\_\_\_\_ Estimated Tier \_\_\_\_\_

Restricted  No  Yes/Describe \_\_\_\_\_

P Waste \_\_\_\_\_ PBT \_\_\_\_\_ WA PBT \_\_\_\_\_ Persistent \_\_\_\_\_ Mobil \_\_\_\_\_

Cancer \_\_\_\_\_ Repro \_\_\_\_\_ Neuro \_\_\_\_\_ Endocrine \_\_\_\_\_

Bird \_\_\_\_\_ Fish \_\_\_\_\_ Bees \_\_\_\_\_ Wildlife \_\_\_\_\_

Attach product label and MSDS to this form.

Describe the pest problem.  
EXCESSIVE SEED HEAD GROWTH ON POA ANNUAL GRASS

Describe the management goals and objectives for this site.  
BY ELIMINATION SEED PRODUCTION, THE BENTGRASS HAS A BETTER CHANCE OF COMPETING AGAINST THE POA WHICH MEANS LESS FUNGICIDES APPLICATIONS IN FUTURE

What is the damage threshold for this pest at this site?  
MINIMAL

Describe the monitoring of the pest and potential predators that was conducted and the control methods previously used at the site.  
N/A

Describe how the product would be applied including frequency, concentration, and method of application.  
THE PRODUCT WOULD BE APPLIED ON A MONTHLY BASIS @ 5 OZ./1000 SQ' USING A SPRAYER. FIRST APPLICATION WOULD BE IN FEBRUARY LAST ONE WOULD BE IN APR

What non-target impacts are anticipated?  
NONE

How does the use of this product help achieve the site management goals? Note if this is curative or preventative.  
USING THIS PRODUCT WOULD REDUCE THE AMOUNT OF POA SEED PRODUCTION WHICH WOULD ALLOW THE BENTGRASS TO ENCRUST INTO THE POA GRASS AREAS. THE DESIRED GRASS IS THE BENTGRASS BECAUSE IT REQUIRES ONLY 10% OF FUNGICIDE APPLICATIONS WHEN COMPARED TO POA GRASS

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MATERIAL EXEMPTION REQUEST FOR PESTICIDE APPLICATION

How will the effectiveness of this product be monitored? Include expected results and indicators of success.  
AFTER THE APPLICATION YOU LOOK FOR SEED DEVELOPMENT, WHEN NEW SEED STARTS TO DEVELOP USUALLY ONE MONTH AFTER THE APPLICATION YOU MAKE YOUR NEXT APPLICATION  
Describe site conditions, for example consider the following: restricted access, distance from a creek or body of water, degree of runoff, site is a pesticide-free zone, etc.  
PUTTING GREENS, NO RUN OFF CONCERNS

List alternatives considered, alternatives implemented and why they were eliminated.  
BALANCED FERTILIZERS WERE APPLIED, MOWING HEIGHTS WERE SET AT DIFFERENT HEIGHTS, VERTICUTTING GREENS TO REMOVE SEED HEADS DIDN'T WORK  
THIS PRODUCT WOULD ONLY BE USED WHEN ALL ALTERNATIVES ARE EXHAUSTED  
Justification: describe why is applying this pesticide is the best solution and why a less-hazardous chemical, non-chemical option or taking no action is not feasible.  
IF YOU TAKE NO ACTION, THE POA GRASS WILL END UP TAKING OVER THE BENTGRASS AND MORE FUNGICIDE APPLICATIONS WILL BE NECESSARY TO MAINTAIN HEALTHY POA GRASS

Was outside expertise utilized?  No  Yes / Describe  
EVERY SUPERINTENDENT IN THE AREA USES THIS CHEMICAL.  
EVERY ONE RECOMMENDS THE USE OF PROXY

Describe future plans to prevent using the chemical again.  
INCREASING BENTGRASS POPULATION AND ELIMINATING POA

Signatures \_\_\_\_\_  
Department IPM Coordinator \_\_\_\_\_ City IPM Coordinator \_\_\_\_\_

Completed by the City of Santa Barbara Staff IPM Committee

Vote Tally \_\_\_\_\_ Disposition:  Approved  Denied/Reason \_\_\_\_\_

If approved, follow the attached best management practices.

Comments:

Completed by the IPM Advisory Committee

Vote Tally \_\_\_\_\_ Disposition:  Approved  Denied/Reason \_\_\_\_\_

If approved, follow the attached best management practices.

Comments:

City of Santa Barbara  
MATERIAL EXEMPTION REQUEST FOR PESTICIDE APPLICATION

City Parks and Recreation IPM Coordinator Santos Escobar Phone 805 564-5464

Pesticide Applicator (employee or company) Name City Park and Recreation staff Phone 805 564 5547

Application Site Golf Course Specific Location Greens

Date(s) 2/2/14

Product Name Fore Active Ingredient Manganese 16% Zinc 2% Ethylene bisdithiocarbamate ion (C4H6N2S4)—62%  
INERT INGREDIENTS 20%

Number of Applications:  One-time  Other

Type:  Emergency  Trial  Programmatic  Other \_\_\_\_\_

Product type:  Herbicide  Insecticide  Fungicide  Other \_\_\_\_\_

Application:  Ornamental  Turf  Golf  Vector Control  Park Tree  Street Tree  
 Right of Way  Vertebrate pest  Other \_\_\_\_\_

Is the pesticide on the *Tiered Materials List*?  No  Yes If yes, provide the Tier \_\_\_\_\_

If the pesticide is not on the *Tiered Materials List*, provide the following screening information. See the IPM Strategy and the *Tiered Materials List* for instructions on screening the pesticide.

EPA Reg # 62719-388 Signal CAUTION Estimated Tier ?

Restricted  No  Yes/Describe \_\_\_\_\_

P Waste \_\_\_\_\_ PBT \_\_\_\_\_ WA PBT \_\_\_\_\_ Persistent \_\_\_\_\_ Mobil \_\_\_\_\_

Cancer \_\_\_\_\_ Repro \_\_\_\_\_ Neuro \_\_\_\_\_ Endocrine \_\_\_\_\_

Bird \_\_\_\_\_ Fish \_\_\_\_\_ Bees \_\_\_\_\_ Wildlife \_\_\_\_\_

Attach product label and MSDS to this form.

Describe the pest problem. Irregular dark areas throughout greens.

Describe the management goals and objectives for this site.  
Deep Tine, Aerification and Leaching.

What is the damage threshold for this pest at this site?  
20% to 30%

Describe the monitoring of the pest and potential predators that was conducted and the control methods previously used at the site.  
Keep the salt levels as low as possible.

Describe how the product would be applied including frequency, concentration, and method of application.  
Application is done with a boom sprayer, interval 7 days at the rate of 4 oz/1000 sq' preventative rate.

What non-target impacts are anticipated?  
None

How does the use of this product help achieve the site management goals? Note if this is curative or preventative. First we leach the green to relieve the stress induced by the salts and then we apply the chemical at preventative rate as it was mixed with insignia to control the disease. Management solely by fungicide applications is not recommended.

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MATERIAL EXEMPTION REQUEST FOR PESTICIDE APPLICATION

How will the effectiveness of this product be monitored? Include expected results and indicators of success. We select one of the most affected areas and we monitor that area first thing in the morning and at midday again for days, and what we look for is older grass leaves, if the leaves appear to be water soaked we know we have not controlled the disease.

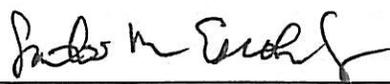
Describe site conditions, for example consider the following: restricted access, distance from a creek or body of water, degree of runoff, site is a pesticide-free zone, etc.  
Greens are all elevated and are not close to any creeks or ponds.

List alternatives considered, alternatives implemented and why they were eliminated.  
Due to the drought, we could not do as much leaching as needed.

Justification: describe why is applying this pesticide is the best solution and why a less-hazardous chemical, non-chemical option or taking no action is not feasible.  
The only solution was to spray the greens as the damage threshold was over 20%. If left untreated we would have lost complete greens.

Was outside expertise utilized?  No  Yes / Describe  
At the time of the chemical application, I sent two samples for disease identification to Phil Colbaugh Turf Pathologist and it was confirmed that we did have Rapid Blight.

Describe future plans to prevent using the chemical again.  
Aerification and leaching the greens with potable water.

Signatures  Department IPM Coordinator  
 City IPM Coordinator

**Completed by the City of Santa Barbara Staff IPM Committee**

Vote Tally \_\_\_\_ Disposition:  Approved  Denied/Reason \_\_\_\_\_

If approved, follow the attached best management practices.

Comments:

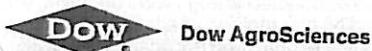
**Completed by the IPM Advisory Committee**

Vote Tally \_\_\_\_ Disposition:  Approved  Denied/Reason \_\_\_\_\_

If approved, follow the attached best management practices.

Comments:

# Specimen Label



# Fore

## 80WP Rainshield

### SPECIALTY FUNGICIDE

#### Product in Water-Soluble Packets

®Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

Group	M3	FUNGICIDE
Active Ingredients		
Mancozeb: A coordination product of zinc ion and manganese ethylene bisdithiocarbamate.....		80.0%
In which the ingredients are:		
Manganese <sup>++</sup> .....	16.00%	
Zinc <sup>++</sup> .....	2.00%	
Ethylene bisdithiocarbamate ion (C <sub>4</sub> H <sub>8</sub> N <sub>2</sub> S <sub>2</sub> ).....	62.00%	
Other Ingredients.....	20.0%	
Total.....		100.0%

#### First Aid

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**\* on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 day or night, for emergency treatment information.

#### Precautionary Statements

##### Hazards to Humans and Domestic Animals

EPA Reg. No. 62719-388

## CAUTION

**Harmful If Absorbed Through The Skin • Causes Moderate Eye Irritation • Avoid contact with skin, eyes or clothing • Prolonged Or Frequently Repeated Skin Contact May Cause Allergic Reactions In Some Individuals**

#### Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are butyl rubber and neoprene rubber. If you want more options, follow the instructions for category "A" on an EPA chemical resistance category selection chart.

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

- Long-sleeved shirt
- Long pants
- Shoes and socks
- Chemical resistant gloves made of any waterproof material (except for pilots)

In addition, all handlers (except pilots, groundboom applicators, and airblast applicators) must wear:

- A NIOSH-approved respirator with a dust/mist filter with MSHA/NIOSH approval number prefix TC-21C or any R, P or HE filter.
- Use an R, P or HE filter when mixing Fore 80WP Rainshield with an oil-based adjuvant.

See engineering controls for additional requirements.

#### User Safety Requirements

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

#### Engineering Controls

Water-soluble packets when used correctly qualify as a closed mixing/loading system under the Worker Protection Standard for Agricultural Pesticides [40 CFR 170.240(d)(4)], Mixers and loaders using water-soluble packets must:

- Wear the personal protective equipment required in the PPE section of this labeling for mixers/loaders
- Be provided, and have immediately available, and wear in an emergency, such as a broken package, spill, or equipment breakdown: a NIOSH-approved respirator with a dust/mist filter with MSHA/NIOSH approval number prefix TC-21C or any R, P or HE filter.

#### User Safety Recommendations

Users should:

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

#### Environmental Hazards

This pesticide is toxic to aquatic organisms. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do 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 cleaning equipment or disposing of equipment washwaters or rinsate.

#### Directions for Use

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

Read all Directions for Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

#### Agricultural Use Requirements

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

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

#### Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Applications on golf courses or around municipal or industrial (office park) buildings and to ornamentals not grown for resale are not within the scope of the Worker Protection Standard.

- Keep unprotected persons out of treated area until sprays have dried.

## Storage and Disposal

Do not contaminate water, food, or feed by storage and disposal.

**Storage:** Keep away from fire and sparks. Do not allow this product to become wet or overheated in storage: decomposition, impaired activity, or fire may result. Keep container closed when not in use.

Decomposition produces a foul odor; if observed, check for hot containers and immediately remove to open areas for disposal.

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

### Nonrefillable rigid containers 50 lb or less:

**Container Handling:** Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** 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. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a 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. Offer for recycling if available, or dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

### Nonrefillable nonrigid containers:

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

### Refillable rigid containers larger than 50 lb:

**Container Handling:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

### Nonrefillable rigid containers larger than 50 lb:

**Container Handling:** Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** 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 a 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. Offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## Product Information

Fore® 80WP Rainshield® specialty fungicide is a unique and different broad-spectrum protectant fungicide that, when used according to label directions, provides high levels of disease control.

Optimum disease control is achieved when the fungicide is applied in a regularly scheduled preventative spray program. The addition of an spreader-sticker will improve fungicide performance by providing a more uniform spray deposit, increased foliar redistribution, and improved fungicide retention during periods of wet weather.

**Chemigation:** Do not apply this product through any type of irrigation system.

Aerial application by fixed or rotary wing aircraft on turf and ornamentals is prohibited.

## Spray Drift Management

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

### Wind Speed

Do not apply at wind speeds greater than 15 mph.

### Temperature Inversions

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

### Other State and Local Requirements

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

### Equipment

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

Do not apply with a nozzle height greater than 4 feet above the crop canopy.

## Use Rate Determination

Carefully read, understand, and follow label use rates and restrictions. Under low disease conditions, minimum label rates per application can be used while maximum label rates and the minimum interval may be used for severe or threatening disease conditions.

For proper application to turfgrass, determine the square footage to be treated, divide the footage by 1000, multiply by the required fungicide use rate per 1000 sq ft, and then determine the amount of water required to provide adequate coverage. When treating ornamentals, determine the required fungicide use rate and the spray gallonage required to provide a thorough coverage. Prepare only the amount of spray solution required to treat the desired area.

## Handling of Water Soluble Packets

The enclosed packets of Fore 80WP Rainshield are water soluble. Do not remove the water soluble packets from overwrap packaging except to add directly to the spray tank. Do not allow packets to become wet prior to adding to the spray tank. Do not handle the packets with wet hands or wet gloves. Do not open water soluble packets. Do not split packets. Partial use of packets is not allowed. Always reseal overwrap bag containing unopened water soluble packets to protect the remaining unused packets.

## Mixing Directions

Be sure the sprayer is clean and not contaminated with other materials. When using an agitated spray tank, fill the tank 1/2 to 3/4 full with clean water and start agitation. Be certain that the agitation system is working properly and creates a rolling rippling on the liquid surface. Turn off the agitator and add the required number of unopened soluble packets of Fore 80WP Rainshield as determined by the required dosage to the tank - being careful not to drop on top of each other. Wait 5 to 10 minutes to allow the packets to thoroughly dissolve before turning on the agitation. Continue filling tank with the remainder of the water. Always add Fore 80WP Rainshield first and insure that it is in solution prior to adding any additional materials to the tank.

## Compatibility

Fore 80WP Rainshield is compatible with boron and spray oils; however, the water soluble packets must be completely dissolved before adding spray oils or products containing boron to spray mixtures.

Fore 80WP Rainshield is compatible with most commonly used agricultural fungicides, insecticides and growth regulators. When preparing tank mixes, consult spray compatibility charts or State Cooperative Extension Service Specialists prior to actual use. Do not tank mix with any product which contains a prohibition on tank mixing. When two pesticides are tank mixed, the more restrictive label conditions apply.

The physical spray compatibility of specific tank mixes can be checked by preparing a sample suspension in a glass container and observing the suspension for any adverse effects, which might interfere with proper spray application.

## Spray Adjuvants

The addition of a surfactant to sprays containing Fore 80WP Rainshield will improve initial spray deposits, fungicide redistribution and weatherability. Place Fore 80WP Rainshield into suspension prior to adding an adjuvant to the spray mixture. Read and carefully observe the precautionary statements and all other information appearing on both product labels prior to spray preparation. When an adjuvant is to be used with this product, Dow AgroSciences recommends the use of a Chemical Producers and Distributors Association certified adjuvant.

**Application Directions**

Fore 80WP Rainshield is a protectant fungicide. Optimum disease control is achieved with thorough coverage sprays applied on a regular schedule.

**Disease Scouting**

Fore 80WP Rainshield is a broad-spectrum protectant fungicide. If not applied on a routine protectant spray schedule, frequently observe turfgrass and ornamental plants for disease signs or symptoms. Apply fungicide at the required label use rate and spray schedule, at the first sign of disease, report of disease in the area, or during environmental conditions favorable for disease development.

**Turfgrass**

For use on golf courses, and industrial or municipal turf areas. Not for use on sod farms, athletic fields and residential turf.

**Restrictions:**  
**Golf Courses:**

- For cool season turfgrasses; greens, tees and aprons - limit to a maximum of five applications per year at a maximum application rate of 21.75 lb of product per acre (17.4 lb ai per acre) per application.
- For cool season turfgrasses; fairways - limit to a maximum of four applications per year at a maximum application rate of 21.75 lb of product per acre (17.4 lb ai per acre) per application.
- For warm season turfgrasses; fairways - limit to a maximum of three applications per year at a maximum application rate of 21.75 lb of product per acre (17.4 lb ai per acre) per application.
- For warm season turfgrasses; greens, tees and aprons - limit to a maximum of four applications per year at a maximum

- application rate of 21.75 lb of product per acre (17.4 lb ai per acre) per application.
- Require a minimum of a 10-day interval between applications.

**All Other Turfgrass:**

- Limit to a maximum of four applications per year and a maximum application rate of 21.75 lb of product per acre (17.4 lb ai per acre) per application
- Require a minimum of a 10-day interval between applications

Each 24 oz water soluble packet treats 6000 sq ft at the 4 oz per 1000 sq ft rate, 4000 sq ft at the 6 oz per 1000 sq ft rate, and 3000 sq ft at the 8 oz per 1000 sq ft rate. Note that the 8 oz per 1000 sq ft rate is the same as the maximum rate of 21.75 lb per acre.

Start application when grass greens up in spring or when disease first appears and repeat at 10- to 14-day intervals or until disease threat is passed. When conditions are especially favorable for disease development, apply maximum fungicide use rate on a 10-day spray schedule. Apply in sufficient water to provide adequate coverage.

**Turfgrass Tolerance**

Maintain treated turfgrass in a vigorous growing condition. Turfgrass under stress will not respond as well to fungicide treatments as well-maintained turfgrass. Turfgrass tolerance to this product has been found to be acceptable; however, this product and tank mixtures with other products have not been tested on all varieties of every turfgrass species or under all possible growing conditions. If user is unfamiliar with the performance of Fore 80WP Rainshield or tank mixtures, under user growing conditions, treat a limited area of turfgrass prior to initiating large-scale applications.

Crop	Diseases Controlled	Fore 80WP Rainshield (oz/1000 sq ft)	Remarks (Also refer to directions for use)	Restrictions
assorted grasses	helminthosporium melting-out rust (leaf, stem, stripe)	4		<ul style="list-style-type: none"> <li>• Do not graze treated areas.</li> <li>• Do not use on turfgrasses intended for grazing, such as range or pasture grasses.</li> <li>• Do not feed grass clippings to livestock.</li> <li>• Do not use on grasses grown for seed.</li> </ul>
	copper spot fusarium blight red thread slime mold	4 - 8		
	algae	6		
	dollar spot	6 - 8		
	rhizoctonia brown patch	4	Apply on a 10-day spray schedule.	
	pythium blight	8	Apply at 10-day intervals	
	rapid blight (a putative chytridiomycete fungus)	8	Apply at a 14-day interval if conditions are favorable for disease development.	
	fusarium snow mold	6 - 8	Apply at 2- to 6-week intervals during winter.	
	gray leaf spot	8	Apply at 14-day intervals if conditions are favorable for disease development.	

**Ornamentals**

**Restrictions:**

- Cut flowers and greenhouse grown ornamentals: Limit to 20 applications per year.
- Do not use any part of treated plants, including fruit, nuts, bark, or sap, for food or feed purposes.
- Do not use on pachysandra.
- Do not apply more than a total of 8.4 lb of Fore 80WP Rainshield per acre per year.
- Not for use in residential greenhouses.

to any large-scale applications on such plants, the user should determine the effects of Fore 80WP Rainshield by testing a small section of the type of plants treated. User assumes all risk arising out of application to unlabeled plants. The Conditions of Sale and Warranty apply to all uses.

For outdoor or greenhouse use, apply the equivalent of 1 1/2 lb of Fore 80WP Rainshield per 100 gallons of dilute spray (1 1/2 lb of Fore 80WP Rainshield per acre). The addition of a surfactant to spray solutions will improve performance.

Begin spraying when plants are well leafed out or at first sign of disease in a full coverage spray at 7- to 10-day intervals throughout season or follow State Extension Service recommended retreatment intervals for disease control on the following ornamental plants:

Neither the manufacturer nor the seller has determined the effects of using Fore 80WP Rainshield on ornamentals not specified on this label. Prior

Crop	Diseases Controlled	Crop Specific Use Directions
African violet	botrytis blight	
ageratum	botrytis blight rust	
almond (ornamental)	leaf spot	
alyssum		
anthurium	anthracnose, spadix rot	
apple (ornamental)	fabraea leaf spot rust scab	
orvita	cercospora blight	
areca palm	leaf spot	

Crop (Cont.)	Diseases Controlled	Crop Specific Use Directions
ash, mountain	entomosporium leaf spot guignardia leaf blotch	
ash, white	anthracnose cyindrosporium leaf spot	
aster	leaf spot	
aster, perennial	puccinia rusts	
aucuba, japonica	alternaria leaf spot anthracnose	
azalea	cyindrocladium rot petal blight phytophthora twig and bud blight	Apply in a full coverage spray, 2 to 3 times a week, while flowers are opening. Direct spray into flowers and thoroughly spray ground under bushes.
begonia	botrytis blight	
bougainvillea	leaf spot	
boxwood		
buffaloberry	cyindrosporium leaf spot	
camellias	petal blight	Refer to azalea.
carnation	rust septoria leaf spot	
cedar, red (juniper)	cercospora blight phomopsis blight	
chrysanthemum	ascochyta blight botrytis petal spot rust	Apply twice weekly during blooming period.
cockscomb ( <i>Celosia</i> )	alternaria leaf spot	
conifers (Christmas trees)	lophodermium needle cast pine gall rust scirrhia brown spot	Begin application in spring or early summer before infection occurs. Repeat after heavy rains and at two- week intervals as long as needed.
cordyline	cercospora leaf spot	
crabapple (ornamental)	cedar-apple rust scab sphaeropsis leaf spot	
cypress, Arizona ( <i>Cupressus</i> sp.)	cercospora blight monochaetia canker	
dahlia	botrytis blight	
delphinium		
dieffenbachia	leptosphaeria brown spot	
dogwood, flowering	anthracnose elsinoe leaf spot septoria leaf spot	Apply when buds begin to open, when bracts have fallen, 4 weeks later and again in late summer after flower buds for next season have formed.
dracaena	fusarium leaf spot	
elm	black leaf spot	
euonymus	anthracnose	
fatsia		
fern	rhizoctonia blight	
figus	cercospora leaf spot	
fig	cyindrocladium leaf spot	
firethorn ( <i>pyracantha</i> )	fusicladium scab	
fir, Douglas	Swiss needle cast	
fir, fraser		
fuchsia	botrytis blight rust	
geranium	rust	
gladiolus	botrytis blossom blight curvularia leaf spot	Make regular weekly applications starting before diseases appear and increase to 2 or 3 applications per week during periods of heavy disease and during rainy weather. On flower spikes, reduce spray concentration to 3/4 lb per 100 gallons.
gloxinia	botrytis blight	
gypsophila		
hawthorn	cedar-apple rust fabraea leaf spot frogeye leaf spot hawthorn rust scab	
hickory	gnomonina leaf spot	
holly	purple spot	

Crop (Cont.)	Diseases Controlled	Crop Specific Use Directions
hollyhock	anthracnose cercospora leaf spot puccinia rust	
honeysuckle	herpobasidium blight	
horsechestnut, buckeye	alternaria leaf spot guignardia leaf blotch	
hydrangea	botrytis blight cercospora leaf spot	
impatiens	botrytis blight	
iris	didymellina leaf spot mycosphaerella leaf spot mystrosporium ink spot	(formerly didymellina)
juniper	phomopsis blight	
larkspur	rust	
laurel, mountain	cercospora leaf spot petal blight	Refer to azalea.
ligustrum	cercospora leaf spot	
lily	botrytis blight	
magnolia	gloeosporium leaf spot	
maple	alternaria leaf spot phyllosticta leaf spot	
marigold	botrytis blossom blight	Do not use on French dwarf double or Signet type marigold seedlings.
narcissus	botrytis blight (fire) smoulder	
oak	actinopelte leaf spot taphrina leaf blister	
orchid ( <i>Dendrobium</i> )	botrytis blossom blight	
oxalis	rust	
pansy	anthracnose	
pears (ornamental)	fabraea leaf spot rust scab	
peony	botrytis blossom blight phytophthora blight	Apply in early spring and early fall, drenching soil around plants as well as the foliage. Promptly destroy all infected plant parts.
peperomia	cercospora leaf spot	
petunia	botrytis blight	
philodendron	dactylaria leaf spot phytophthora leaf spot	
phlox	leaf spot	
photinia	entomosporium leaf spot	
pine, Australia	cyclaneusma needle cast	
pine, Scotch	cyclaneusma needle cast gall rust	
pittosporum	alternaria leaf spot	
pleomele	fusarium leaf spot	
poinsettia	sphaceloma scab	
poplar	rust	
primrose	botrytis blight	
protea		
quince (ornamental)	fabraea leaf spot rust scab	
rhododendron	cercospora leaf spot discosia leaf spot petal blight	Refer to azalea.
rose	black spot cercospora leaf spot rust	
rosemary	rhizoctonia aerial blight	
schefflera	alternaria blight	
Scotts pine	needle cast	
unkbush, sumac	cylindrosporium leaf spot	
spdragon	rust	
spathiphyllum	myrothecium leaf spot	

Crop (Cont.)	Diseases Controlled	Crop Specific Use Directions
statice	cercospora frogeye	
strawflower	rust	
syngonium	cephalosporium leaf spot	
thorn apple	rust	
tulip	botrytis blight (fire)	
venus, flytrap	anthracnose	
viburnum	downy mildew ramularia leaf spot	
walnut	anthracnose	
zinnia	alternaria leaf blight	

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

### Terms and Conditions of Use

If terms of the following Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. To the extent permitted by law, otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies.

### Warranty Disclaimer

Dow AgroSciences warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. TO THE EXTENT PERMITTED BY LAW, Dow AgroSciences MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

### Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Dow AgroSciences or the seller. To the extent permitted by law, all such risks shall be assumed by buyer.

### Limitation of Remedies

To the extent permitted by law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Dow AgroSciences' election, one of the following:

1. Refund of purchase price paid by buyer or user for product bought, or
2. Replacement of amount of product used.

To the extent permitted by law, Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing. To the extent permitted by law, in no case shall Dow AgroSciences be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Dow AgroSciences or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or Limitation of Remedies in any manner.

®Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

Produced for  
Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268

Label Code: D02-839-002  
Replaces Label: D02-839-001  
LOES Number: 010-01589  
EPA accepted June 5, 2013.

### Revisions:

1. Update to trademark information
2. Revisions per the mancozeb reregistration eligibility decision (RED) for wettable powder, no seed treatment uses; and water soluble packaging, no seed treatment uses: PPE; engineering controls; user safety recommendations; environmental hazards; ag use requirements; restriction for ornamentals; removed turf use from wettable powder not in WSP; removed sod farm use
3. Revised label to a split label format to allow turf use only in products packaged in water soluble packaging
4. Updated Storage and Disposal per EPA Standards for Pesticide Container & Containment; Final Rule - effective October 16, 2006 (PR Notice 2007-4).
5. Added Produced for and street address to DAS address
6. Updated referral statements
7. Revised warranty language
8. Revised Mixing Procedures
9. Deleted directions for hand sprayers
10. Revised Precautionary statements
11. Revised Engineering controls:
12. User Safety Requirements: Place the text: "Follow manufacturer's instructions for cleaning . . . Do not reuse them." inside a box and title the box "User Safety Requirements."
13. General Information: Add Spray Drift Management section
14. Changed Use Rate Determination:
15. Water-Soluble Packaging: Change "Each 24 ounce water-soluble packet will treat 6000 square feet at the 4 ounce rate, 4000 square feet at the 6 ounce rate, and 3000 square feet at the 8 ounce rate." to: "Each 24 ounce water-soluble packet will treat 6000 square feet at the 4 ounce/1000 square feet rate, 4000 square feet at the 6 ounce/1000 square feet rate, and 3000 square feet at the 8 ounce/1000 square feet rate. Note that the 8 ounce/1000 square feet rate is the same as the maximum rate of 21.75 lb/acre"
16. Sod Farm, Athletic Fields and Residential Turf Prohibition: After "For use on golf courses and industrial or municipal turf areas." add "Not for use on sod farms, athletic fields and residential turf."
17. Revise the chemical-resistant glove statement
18. Use Directions for Ornamentals: Change the bullet: "Do not use for food or feed purposes." to "Do not use any part of treated plants, such as fruit, nuts, foliage or sap, for food or feed purposes." Add the following bullets: "Do not use on pachysandra." "Do not apply more than 8.4 lb Fore 80 WP Rainshield per acre per year."
19. Non-Agricultural Use Requirements Box revised
20. Revised respirator language.
21. Personal Protective Equipment: For all handlers, added "Use an R, P or HE filter when mixing Fore 80WP Rainshield with an oil-based adjuvant."
22. Non-Agricultural Use Requirements: Changed "Seed treatments and . . . Worker Protection Standard." to "Application on golf courses or around municipal or industrial (office park) buildings and to ornamentals not grown for resale are not within the scope of the Worker Protection Standard."
23. DAS confirms that the product name is "Fore 80WP Rainshield" and the generic descriptor is "specialty fungicide."

# MATERIAL SAFETY DATA SHEET



Emergency Phone: 800-992-5994  
Dow AgroSciences LLC  
Indianapolis, IN 46268

Effective Date: 31-Jan-12  
Product Code: 88794  
MSDS: 007774

## FORE\* 80WP RAINSHIELD SPECIALTY FUNGICIDE

### 1. PRODUCT AND COMPANY IDENTIFICATION:

**PRODUCT:** Fore\* 80WP Rainshield Specialty Fungicide

#### COMPANY IDENTIFICATION:

Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268-1189

### 2. HAZARDOUS IDENTIFICATIONS:

#### EMERGENCY OVERVIEW

Blue to green solid with a musty odor. May cause eye and skin irritation. LD<sub>50</sub> for skin absorption is >5000 mg/kg. Oral LD<sub>50</sub> is >8000 mg/kg. Inhalation LC<sub>50</sub> is >5.14 mg/L for 4 hours. Toxic to aquatic organisms.

**EMERGENCY PHONE NUMBER:** 800-992-5994

### 3. COMPOSITION/INFORMATION ON INGREDIENTS:

Mancozeb: [[1,2-ethanediybis[carbamo- -lithioato]](2-)]manganese mixture with [[1,2-ethanediybis [carbomodithioato]](2-)]-zinc	CAS # 008018-01-7	80%
Balance, Total, Including:		20%
Calcium Lignosulfonate	CAS # 008061-52-7	
Ethylene Thiourea	CAS # 000096-45-7	
Hexamethylene Tetramine	CAS # 000100-97-0	

**NOTE TO PHYSICIAN:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

### 5. FIRE FIGHTING MEASURES:

**FLASH POINT:** 295°F (146°C)  
**METHOD USED:** TOC

#### FLAMMABLE LIMITS:

LFL: 0.16 oz/ft<sup>3</sup> 160.18 g/M<sup>3</sup>  
UFL: Not determined

**EXTINGUISHING MEDIA:** When product is involved in a fire use carbon dioxide, dry chemical, water spray, or foam. Contain run-off. Use water spray to cool containers exposed to fire.

**FIRE & EXPLOSION HAZARDS:** Particulates can become airborne. Combustion generates toxic fumes including the following: hydrogen sulfide, sulfur oxides, and carbon oxides. The minimum ignition temperature of dust cloud is 590°F (310°C). The minimum ignition temperature of dust layer is 270°F (132°C). Dusts of sufficient concentrations can form explosive mixtures with air.

**FIRE-FIGHTING EQUIPMENT:** Wear positive pressure self-contained breathing apparatus with full protective clothing. Remain upwind. Avoid breathing smoke.

### 4. FIRST AID:

**EYES:** Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.

**SKIN:** Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Discard items, which cannot be decontaminated, including leather articles such as shoes, belts, and watchbands.

**INGESTION:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Never give anything by mouth to an unconscious person.

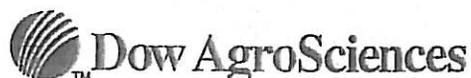
**INHALATION:** Move person to fresh air; if effects occur, consult a physician.

### 6. ACCIDENTAL RELEASE MEASURES:

**ACTION TO TAKE FOR SPILLS/LEAKS:** Sweep up small spills and place in a suitable container for disposal. Wash thoroughly after handling. Contain large spills and report them to Dow AgroSciences at 800-992-5994.

Appropriate protective equipment must be worn when handling a spill of this material. If exposed to material during clean-up operations, remove all contaminated clothing promptly. Wash all exposed skin areas with soap and water immediately after exposure. Thoroughly launder clothing before reuse. Do not take clothing home to be laundered.

# MATERIAL SAFETY DATA SHEET



Emergency Phone: 800-992-5994  
Dow AgroSciences LLC  
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Effective Date: 31-Jan-12  
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## FORE\* 80WP RAINSHIELD SPECIALTY FUNGICIDE

### 7. HANDLING AND STORAGE:

#### PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

**HANDLING:** Do not handle material near food, feed or drinking water. Avoid high concentrations of dust in air and accumulation of dust on equipment. An airborne dust of this material can create a dust explosion. When handling and processing this material local exhaust ventilation may be required to control dust and reduce exposure to vapors. To prevent dust explosions employ bonding and grounding for operations capable of generating static electricity. Protect all equipment from explosions by following the NFPA 68 & 69 guidelines.

**STORAGE:** Do not store this material near food, feed or drinking water. Store in a well-ventilated area. Store in a dry area. DO NOT ALLOW Mancozeb to become wet or overheated in storage; decomposition, impaired activity or fire may result. Material is combustible; do not ignite. Store bagged material only on pallets no more than 3 high. Provide access aisles for each 2 rows. Loose bags should not be stacked more than 2x2x2 meters. Dense packing of unvented stacks of bags may lead to product decomposition posing a fire hazard. Decomposition produces a foul odor. Check for hot containers and immediately remove to open areas for disposal. Keep container tightly closed when not in use.

**OTHER:** Completely empty bag into application equipment. Dispose empty bag in a sanitary landfill as allowed by state and local authorities.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions.

#### EXPOSURE GUIDELINE:

Mancozeb: Dow AgroSciences Industrial Hygiene Guide is 1 mg/M<sup>3</sup>, dermal sensitizer.

**ENGINEERING CONTROLS:** Provide general and/or local exhaust ventilation to control airborne levels below the exposure guideline.

#### RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

**EYE/FACE PROTECTION:** Use chemical goggles.

**SKIN PROTECTION:** Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur.

**RESPIRATORY PROTECTION:** Atmospheric levels should be maintained below the exposure guideline. If respiratory irritation is experienced, use a NIOSH approved air-purifying respirator for dust.

**APPLICATORS AND ALL OTHER HANDLERS:** Refer to the product label for personal protective clothing and equipment.

### 9. PHYSICAL AND CHEMICAL PROPERTIES:

**BOILING POINT:** Not applicable  
**MELTING POINT:** 378-399°F (192-204°C)  
**VAPOR PRESSURE:** Negligible  
**VAPOR DENSITY:** Not applicable  
**SOLUBILITY IN WATER:** Dispersible  
**SPECIFIC GRAVITY:** 0.35 - 0.60 g/cc (bulk density)  
**APPEARANCE:** Blue to green solid  
**ODOR:** Musty  
**PERCENT VOLATILITY:** 1% water  
**pH:** Not applicable  
**VISCOSITY:** Not applicable  
**EVAPORATION RATE:** Not applicable

### 10. STABILITY AND REACTIVITY:

**STABILITY: (CONDITIONS TO AVOID)** Material is stable under normal storage conditions. Keep away from moisture, heat or flame.

**INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID)** Avoid contact with oxidizing agents and acids.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition may yield the following: carbon disulfide and hydrogen sulfide.

**HAZARDOUS POLYMERIZATION:** Not known to occur.

### 11. TOXICOLOGICAL INFORMATION:

**POTENTIAL HEALTH EFFECTS:** This section includes possible adverse effects, which could occur if this material is not handled in the recommended manner.

**EYES:** May cause severe eye irritation with corneal injury.

# MATERIAL SAFETY DATA SHEET



Emergency Phone: 800-992-5994  
Dow AgroSciences LLC  
Indianapolis, IN 46268

## FORE\* 80WP RAINSHIELD SPECIALTY FUNGICIDE

Effective Date: 31-Jan-12  
Product Code: 88794  
MSDS: 007774

**SKIN:** Prolonged contact may cause slight skin irritation with local redness. Skin contact may cause an allergic skin reaction in a small proportion of individuals. Prolonged skin contact is unlikely to result in absorption of harmful amounts. The LD<sub>50</sub> for skin absorption in rabbits is >5000 mg/kg.

**INGESTION:** Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. The oral LD<sub>50</sub> for rats is >8000 mg/kg.

**INHALATION:** Dust may cause irritation of the upper respiratory tract (nose and throat) and lungs. The LC<sub>50</sub> for rats is >5.14 mg/L for 4 hours.

**SYSTEMIC (OTHER TARGET ORGAN) EFFECTS:** In animals, effects have been reported on the following organs: thyroid, liver, nervous system, and eyes.

**CANCER INFORMATION:** Has caused cancer in laboratory animals.

**TERATOLOGY (BIRTH DEFECTS):** Has caused birth defects in laboratory animals only at doses toxic to the mother.

**REPRODUCTIVE EFFECTS:** In animal studies, did not interfere with reproduction.

**MUTAGENICITY:** In-vitro genetic toxicity studies were predominantly negative. Animal genetic toxicity studies were negative.

### 12. ECOLOGICAL INFORMATION:

#### ENVIRONMENTAL FATE:

#### MOVEMENT & PARTITIONING:

Based largely or completely on information for mancozeb.  
Bioconcentration potential is low (BCF <100 or Log Pow <3).  
Potential for mobility in soil is low (Koc between 500 and 2000).

#### DEGRADATION & PERSISTENCE:

Based largely or completely on information for mancozeb.  
Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.  
Biodegradation rate may increase in soil and/or water with acclimation.

#### ECOTOXICOLOGY:

Material is very highly toxic to aquatic organisms on an acute basis (LC<sub>50</sub> or EC<sub>50</sub> is <1 mg/L in most sensitive species tested).  
Acute LC<sub>50</sub> in rainbow trout (*Oncorhynchus mykiss*) is 2.2 ppm.  
Acute LC<sub>50</sub> in channel catfish (*Ictalurus punctatus*) is 5.2 ppm.  
Acute immobilization EC<sub>50</sub> in water flea (*Daphnia magna*) is 3.8 mg/L.  
Acute LC<sub>50</sub> in bluegill (*Lepomis macrochirus*) is 2.04 mg/L.  
Acute LC<sub>50</sub> in water flea (*Daphnia magna*) is 1.0 mg/L.  
Growth inhibition EC<sub>50</sub> in green alga (*Selenastrum capricornutum*) is 0.063 mg/L.  
Maximum acceptable toxicant concentration (MATC) in fish early life-stage study is 0.00316 mg/L.  
Maximum acceptable toxicant concentration (MATC) in water flea (*Daphnia magna*) is 0.0094 mg/L.  
Acute LC<sub>50</sub> in saltwater mysid (*Mysidopsis bahia*) is 0.067 mg/L.  
Acute LC<sub>50</sub> in sheepshead minnow (*Cyprinodon variegatus*) is 1.5 mg/L.  
Acute EC<sub>50</sub> for shell deposition inhibition in eastern oyster (*Crassostrea virginica*) is 2.01 mg/L.  
Material is practically non-toxic to birds on a dietary basis (LC<sub>50</sub> is >5000 ppm).  
Dietary LC<sub>50</sub> in mallard (*Anas platyrhynchos*) is >6400 ppm.  
Dietary LC<sub>50</sub> in Japanese quail (*Coturnix coturnix japonica*) is approx. 42,000 ppm.  
Material is practically non-toxic to birds on an acute basis (LD<sub>50</sub> is >2000 mg/kg).  
Acute oral LD<sub>50</sub> in mallard (*Anas platyrhynchos*) is 6400 mg/kg.

### 13. DISPOSAL CONSIDERATIONS:

**DISPOSAL METHOD:** Do not contaminate food, feed, or water by storage or disposal. Wastes are toxic and classified as RCRA hazardous waste, hazardous waste number: U116 (ethylene thiourea) (40 CFR 261). Improper disposal of excess waste, spray mixture, or rinsate is a violation of federal law. Spray mixture or rinse water that cannot be used according to label instructions must be disposed of in accordance with applicable local, state or federal requirements. Contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

# MATERIAL SAFETY DATA SHEET



Emergency Phone: 800-992-5994  
Dow AgroSciences LLC  
Indianapolis, IN 46268

## FORE\* 80WP RAINSHIELD SPECIALTY FUNGICIDE

Effective Date: 31-Jan-12  
Product Code: 88794  
MSDS: 007774

### 14. TRANSPORT INFORMATION:

DOT Non-bulk  
NOT REGULATED

#### DOT Bulk

Proper Shipping Name: ENVIRONMENTALLY  
HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Technical Name: MANCOZEB

Hazard Class: 9 ID Number: UN3077

Packing Group: PG III

#### IMDG

Proper Shipping Name: ENVIRONMENTALLY  
HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Technical Name: MANCOZEB

Hazard Class: 9 ID Number: UN3077

Packing Group: PG III

EMS Number: F-A,S-F

Marine Pollutant: Yes

#### ICAO/IATA

Proper Shipping Name: ENVIRONMENTALLY  
HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Technical Name: MANCOZEB

Hazard Class: 9 ID Number: UN3077

Packing Group: PG III

Cargo Packing Instruction: 956

Passenger Packing Instruction: 956

#### Additional Information

MARINE POLLUTANT (MANCOZEB)

### 15. REGULATORY INFORMATION:

**NOTICE:** The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.

### U.S. REGULATIONS

**SARA 313 INFORMATION:** This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
Ethylene Thiourea	000096-45-7	<0.1%
Mancozeb	008018-01-7	80%

Generic Group Name for Mancozeb:  
Ethylenebisdithiocarbamic Acid (CAS # 000111-54-6)

**SARA HAZARD CATEGORY:** This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

An immediate health hazard  
A delayed health hazard

**CALIFORNIA PROPOSITION 65:** The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986:

This product contains trace levels of a component known to the state of California to cause cancer, birth defects, or other reproductive harm. The component is Ethylene thiourea (000096-45-7)

This product contains a component known to the state of California to cause cancer. The component is Mancozeb (008018-01-7)

**TOXIC SUBSTANCES CONTROL ACT (TSCA):** All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

# MATERIAL SAFETY DATA SHEET



Emergency Phone: 800-992-5994  
Dow AgroSciences LLC  
Indianapolis, IN 46268

## FORE\* 80WP RAINSHIELD SPECIALTY FUNGICIDE

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Product Code: 88794  
MSDS: 007774

**STATE RIGHT-TO-KNOW:** The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

CHEMICAL NAME	CAS NUMBER	LIST
Ethylene Thiourea	000096-45-7	PA1 PA2 PA3
Ethylenebisdithiocarbamic Acid	000111-54-6	PA1 PA3

PA1=Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%).  
PA2=Pennsylvania Special Hazardous Substance (present at greater than or equal to 0.01%).  
PA3=Pennsylvania Environmental Hazardous Substance (present at greater than or equal to 1.0%).

**OSHA HAZARD COMMUNICATION STANDARD:** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:

Health	2
Flammability	1
Reactivity	0

**COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND):** This product contains the following substance(s) listed as "Hazardous Substances" under CERCLA, which may require reporting of releases:

Chemical Name	CAS#	RQ	% in Product
Ethylene Thiourea	000096-45-7	10 lbs.	<0.1%
Mancozeb	008018-01-7	5000 lbs.	80%

Generic Group Name for Mancozeb:  
Ethylenebisdithiocarbamic Acid (CAS # 000111-54-6)

### 16. OTHER INFORMATION:

**MSDS STATUS:** Revised Sections: 14 & 15  
Reference: DR-0385-8604  
Replaces MSDS Dated: 17-May-10  
Document Code: D03-839-004  
Replaces Document Code: D03-839-003

Information Herein Is Given In Good Faith, But No Warranty, Express or Implied, Is Made. Consult Dow AgroSciences for Further Information.

City of Santa Barbara  
MATERIAL EXEMPTION REQUEST FOR PESTICIDE APPLICATION

Dept Parks and Recreation IPM Coordinator Santos Escobar Phone 805 564-5464

Pesticide Applicator (employee or company) Name City Park and Recreation staff Phone 805 564 5547

Application Site Golf Course Specific Location Greens

Date(s) 2/02/14 2/6/14 2/7/14 5/14/14

Product Name Insignia Active Ingredient pyraclostrobon, (carbamic acid,[2-[[[1-(4-chlorophenyl)-1H-pyrazol-3-yl]oxy]methyl]phenyl]methoxy-,methyl ester) 23.3% other ingredients 76.7%

Number of Applications:  One-time  Other

Type: Emergency  Trial  Programmatic  Other \_\_\_\_\_

Product type: Herbicide  Insecticide  Fungicide  Other \_\_\_\_\_

Application:  Ornamental  Turf  Golf  Vector Control  Park Tree  Street Tree

Right of Way  Vertebrate pest  Other \_\_\_\_\_

Is the pesticide on the *Tiered Materials List*?  No  Yes If yes, provide the Tier \_\_\_\_\_

If the pesticide is not on the *Tiered Materials List*, provide the following screening information. See the IPM Strategy and the *Tiered Materials List* for instructions on screening the pesticide.

EPA Reg # 7969-290 Signal Warning Estimated Tier ?

Restricted  No  Yes/Describe \_\_\_\_\_

P Waste \_\_\_\_\_ PBT \_\_\_\_\_ WA PBT \_\_\_\_\_ Persistent \_\_\_\_\_ Mobil \_\_\_\_\_

Cancer \_\_\_\_\_ Repro \_\_\_\_\_ Neuro \_\_\_\_\_ Endocrine \_\_\_\_\_

Bird \_\_\_\_\_ Fish \_\_\_\_\_ Bees \_\_\_\_\_ Wildlife \_\_\_\_\_

Attach product label and MSDS to this form.

Describe the pest problem. Irregular dark areas throughout greens.

Describe the management goals and objectives for this site.  
Deep Tine, Aerification and Leaching.

What is the damage threshold for this pest at this site?  
20% to 30%

Describe the monitoring of the pest and potential predators that was conducted and the control methods previously used at the site.  
Keep the salt levels as low as possible.

Describe how the product would be applied including frequency, concentration, and method of application.  
Application is done with a boom sprayer, interval 7 to 14 days at an application rate of 4 oz/1000 sq' preventative rate and at .7 oz /1000 sq' curative rate.

What non-target impacts are anticipated?  
None

How does the use of this product help achieve the site management goals? Note if this is curative or preventative. First we leach the green to relieve the stress induced by the salts and then we apply the chemical at a curative rate in order to control the disease. Management solely by fungicide applications is not recommended.

City of Santa Barbara  
MATERIAL EXEMPTION REQUEST FOR PESTICIDE APPLICATION

Will the effectiveness of this product be monitored? Include expected results and indicators of success.  
Select one of the most affected areas and we monitor that area first thing in the morning and at midday again for days, and what we look for is older grass leaves, if the leaves appear to be water soaked we know we have not controlled the disease.

Describe site conditions, for example consider the following: restricted access, distance from a creek or body of water, degree of runoff, site is a pesticide-free zone, etc.

Greens are all elevated and are not close to any creeks or ponds.

List alternatives considered, alternatives implemented and why they were eliminated.  
Due to the drought, we could not do as much leaching as needed.

Justification: describe why is applying this pesticide is the best solution and why a less-hazardous chemical, non-chemical option or taking no action is not feasible.

The only solution was to spray the greens as the damage threshold was over 20%. If left untreated we would have lost complete greens.

Was outside expertise utilized?  No  Yes / Describe

At the time of the chemical application, I sent two samples for disease identification to Phil Colbaugh Turf Pathologist and it was confirmed that we did have Rapid Blight.

Describe future plans to prevent using the chemical again.  
Aerification and leaching the greens with potable water.

Signatures

  
Department IPM Coordinator

  
City IPM Coordinator

Completed by the City of Santa Barbara Staff IPM Committee

Vote Tally \_\_\_\_ Disposition:  Approved  Denied/Reason \_\_\_\_\_

If approved, follow the attached best management practices.

Comments:

Completed by the IPM Advisory Committee

Vote Tally \_\_\_\_ Disposition:  Approved  Denied/Reason \_\_\_\_\_

If approved, follow the attached best management practices.

Comments:



The Chemical Company

# Safety Data Sheet

## INSIGNIA SC INTRINSIC BRAND FUNGICIDE

Revision date : 2010/09/07  
Version: 1.3

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### 1. Product and Company Identification

Use: crop protection product, fungicide

Company  
BASF CORPORATION  
100 Campus Drive  
Florham Park, NJ 07932, USA

24 Hour Emergency Response Information  
CHEMTREC: 1-800-424-9300  
BASF HOTLINE: 1-800-832-HELP

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Substance number:	000000342244
Molecular formula:	C19 H18 Cl N3 O4
Chemical family:	strobilurine
Synonyms:	pyraclostrobin

---

### 2. Hazards Identification

#### Emergency overview

**WARNING:**  
May be fatal if swallowed.  
May be harmful if absorbed through skin.  
May cause moderate but temporary irritation to the eyes.  
**KEEP OUT OF REACH OF CHILDREN.**  
**KEEP OUT OF REACH OF DOMESTIC ANIMALS.**  
Avoid contact with the skin, eyes and clothing.  
Avoid inhalation of dusts/mists/vapours.  
Wash thoroughly after handling.

See Product Label for additional precautionary statements.

State of matter: liquid  
Colour: pure white  
Odour: odourless

#### Potential health effects

##### **Primary routes of exposure:**

Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

##### **Acute toxicity:**

Relatively nontoxic after short-term inhalation. Moderately toxic after single ingestion. Relatively nontoxic after short-term skin contact.

**Irritation / corrosion:**

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May cause moderate but temporary irritation to the eyes. May cause moderate irritation to the skin.

### Sensitization:

Skin sensitizing effects were not observed in animal studies.

### Potential environmental effects

#### Aquatic toxicity:

Very toxic (acute effect) to aquatic organisms.

#### Terrestrial toxicity:

With high probability not acutely harmful to terrestrial organisms.

### 3. Composition / Information on Ingredients

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
175013-18-0	<= 23.0 %	Pyraclostrobin
	<= 76.0 %	Proprietary ingredients

### 4. First-Aid Measures

#### General advice:

First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or physician for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

#### If inhaled:

Remove the affected individual into fresh air and keep the person calm.

#### If on skin:

Rinse skin immediately with plenty of water for 15 - 20 minutes.

#### If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

#### If swallowed:

Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Do not induce vomiting. Have person sip a glass of water if able to swallow.

#### Note to physician

Antidote: No known specific antidote.  
Treatment: Treat symptomatically.

### 5. Fire-Fighting Measures

Flash point:	Non-flammable.
Autoignition:	not applicable
Self-ignition temperature:	not self-igniting

**Suitable extinguishing media:**  
foam, dry powder, carbon dioxide, water spray

#### **Hazards during fire-fighting:**

carbon monoxide, carbon dioxide, nitrogen dioxide, nitrogen oxide, Hydrogen chloride, halogenated hydrocarbons, Hydrocarbons,

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If product is heated above decomposition temperature, toxic vapours will be released. The substances/groups of substances mentioned can be released in case of fire.

### Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

### Further information:

Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

---

## 6. Accidental release measures

### Personal precautions:

Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

### Environmental precautions:

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

### Cleanup:

Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

---

## 7. Handling and Storage

### Handling

#### General advice:

RECOMMENDATIONS ARE FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS. PESTICIDE APPLICATORS & WORKERS must refer to the Product Label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170. Ensure adequate ventilation. Provide good ventilation of working area (local exhaust ventilation if necessary). Keep away from sources of ignition - No smoking. Keep container tightly sealed. Protect contents from the effects of light. Protect against heat. Protect from air. Handle and open container with care. Do not open until ready to use. Once container is opened, content should be used as soon as possible. Avoid aerosol formation. Avoid dust formation. Provide means for controlling leaks and spills. Do not return residues to the storage containers. Follow label warnings even after container is emptied. The substance/product may be handled only by appropriately trained personnel. Avoid all direct contact with the substance/product. Avoid contact with the skin, eyes and clothing. Avoid inhalation of dusts/mists/vapours. Wear suitable personal protective clothing and equipment.

#### Protection against fire and explosion:

The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Sources of ignition should be kept well clear. Avoid extreme heat. Keep away from oxidizable substances. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

### Storage

#### General advice:

Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination. The authority permits and storage regulations must be observed.

#### Storage incompatibility:

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General advice: Segregate from incompatible substances. Segregate from foods and animal feeds. Segregate from textiles and similar materials.

### Temperature tolerance

Protect from temperatures above: 40 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

## 8. Exposure Controls and Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

### Components with workplace control parameters

crystalline silica	OSHA	TWA value 2.4 millions of particles per cubic foot of air Respirable ; The value is calculated from a specified equation using a value of 100%. Lower values of % will give higher exposure limits. See regulation for specific equation. TWA value 0.1 mg/m3 Respirable ; The value is calculated from a specified equation using a value of 100%. Lower values of % will give higher exposure limits. See regulation for specific equation. TWA value 0.3 mg/m3 Total dust ; The value is calculated from a specified equation using a value of 100%. Lower values of % will give higher exposure limits. See regulation for specific equation.
	ACGIH	TWA value 0.025 mg/m3 Respirable fraction ;

### Advice on system design:

Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

### Personal protective equipment

#### RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

##### Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

##### Hand protection:

Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

##### Eye protection:

Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

##### Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

##### General safety and hygiene measures:

Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off

# Safety Data Sheet

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immediately all contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

### 9. Physical and Chemical Properties

Form:	liquid, suspension	
Odour:	odourless	
Colour:	pure white	
pH value:	approx. 5.6	( 1 %(m), 25 °C)
Freezing point:	approx. 0 °C	Information applies to the solvent.
Boiling point:	approx. 100 °C	Information applies to the solvent.
Vapour pressure:	approx. 23.3 hPa	( 20 °C) Information applies to the solvent.
Density:	1.0683 g/cm <sup>3</sup>	( 20 °C)
Relative density:	1.070	
Partitioning coefficient n-octanol/water (log Pow):		not applicable
Viscosity, dynamic:	approx. 1.514 Pa.s	( 20 °C)
Solubility in water:		dispersible
Molar mass:	387.82 g/mol	

### 10. Stability and Reactivity

#### Conditions to avoid:

Avoid all sources of ignition: heat, sparks, open flame. Avoid extreme temperatures. Avoid prolonged exposure to extreme heat. Avoid contamination. Avoid electro-static discharge. Avoid prolonged storage.

#### Substances to avoid:

strong oxidizing agents

#### Hazardous reactions:

The product is chemically stable.

Hazardous polymerization will not occur. No hazardous reactions if stored and handled as prescribed/indicated.

#### Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated., Prolonged thermal loading can result in products of degradation being given off.

#### Thermal decomposition:

> 350 °C (DSC (DIN 51007))

Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released.

#### Corrosion to metals:

Corrosive effects to metal are not anticipated.

#### Oxidizing properties:

not fire-propagating

### 11. Toxicological information

#### Acute toxicity

##### Oral:

Type of value: LD50

Species: rat (female)

Value: approx. > 50 - < 500 mg/kg

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### Inhalation:

Type of value: LC50  
Species: rat (male/female)  
Value: 5.06 mg/l  
Exposure time: 4 h  
An aerosol was tested.

### Dermal:

Type of value: LD50  
Species: rat (male/female)  
Value: > 5,000 mg/kg

### Irritation / corrosion

#### Skin:

Species: rabbit  
Result: moderately irritating

#### Eye:

Species: rabbit  
Result: non-irritant

### Sensitization:

Buehler test  
Species: guinea pig  
Result: Skin sensitizing effects were not observed in animal studies.

### Genetic toxicity

*Information on: pyraclostrobin*

*No mutagenic effect was found in various tests with microorganisms and mammalian cell culture.*

### Carcinogenicity

*Information on: pyraclostrobin*

*In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.*

### Reproductive toxicity

*Information on: pyraclostrobin*

*The results of animal studies gave no indication of a fertility impairing effect.*

### Development:

*Information on: pyraclostrobin*

*No indications of a developmental toxic / teratogenic effect were seen in animal studies.*

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## 12. Ecological Information

### Fish

*Information on: pyraclostrobin*

*Acute:*

*Cyprinus carpio/LC50 (96 h): > 0.0121 - < 0.0258 mg/l*

*Lepomis macrochirus/LC50 (96 h): > 0.0196 - < 0.0335 mg/l*

*Oncorhynchus mykiss/LC50 (96 h): 0.00616 mg/l*

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### Aquatic invertebrates

*Information on: pyraclostrobin*

*Acute:*

*Daphnia magna/EC50 (48 h): 0.016 mg/l*

### Aquatic plants

*Information on: pyraclostrobin*

*Toxicity to aquatic plants:*

*green algae/EC50 (96 h): > 0.843 mg/l*

### Non-Mammals

*Information on: pyraclostrobin*

*Other terrestrial non-mammals:*

*bobwhite quail/LD50: > 2,000 mg/kg*

*bobwhite quail:*

*mallard duck/LC50: > 5,000 ppm*

*Honey bee/LD50: > 100 ug/bee*

### Other adverse effects:

Do not discharge product into the environment without control. The product has not been tested. The ecological data given are those of the active ingredient.

The ecological data given are those of the active ingredient. Do not release untreated into natural waters.

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## 13. Disposal considerations

### **Waste disposal of substance:**

Pesticide wastes are regulated. Improper disposal of excess pesticide, spray mix or rinsate is a violation of federal law. If pesticide wastes cannot be disposed of according to label instructions, contact the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

### **Container disposal:**

Rinse thoroughly at least three times (triple rinse) in accordance with EPA recommendations. Consult state or local disposal authorities for approved alternative procedures such as container recycling. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

### **RCRA:**

This product is not regulated by RCRA.

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## 14. Transport Information

Reference Bill of Lading

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## 15. Regulatory Information

### Federal Regulations

#### Registration status:

Chemical TSCA, US blocked / not listed

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Crop Protection TSCA, US released / exempt

OSHA hazard category: Acute target organ effects reported; Toxic - oral; Toxic - inhalation

EPCRA 311/312 (Hazard categories): Acute;

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### 16. Other Information

Refer to product label for EPA registration number.

Recommended use: fungicide

NFPA Hazard codes:

Health : 2

Fire: 1

Reactivity: 1

Special:

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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MSDS Prepared by:

BASF NA Product Regulations

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MSDS Prepared on: 2010/09/07

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