



City of Santa Fe, New Mexico

Memorandum



DATE: July 10, 2024

TO: Melissa McDonald, Parks and Open Space Division Director
Ryan Pitcher, City of Santa Fe IPM Manager

VIA: Gerald Shewan, Golf Course Assistant Superintendent

FROM: Lorenzo Vigil, Golf Course General Manager

SUBJECT: Request for Use of Fungicide, HEADWAY G

Item and Issue:

Managing fungi in a turf environment that is designed to play a sports activity such as golf, requires a playable turf surface where an infestation of fungi impedes the objective of the game. Best management practices including mowing height, irrigation and fertility management have been implemented, yet the fungus known as *Anthraco* has begun to cause brown spot (*rhizoctonia solani*) on the putting greens at the Marty Sanchez Links de Santa Fe Golf Course. These fungus populations are causing interference with the golf game and compete for water and soil nutrients. Chemical control of fungi at MSLdSF will improve turf areas now impacted negatively by fungi populations. This request for fungicide application to turf areas is for the following caution labeled fungicide:

Trade Name–Headway G, Signal word "Caution", EPA REG. NO. 100-1378; Use Rate is 4lbs per 1,000sq ft.

Active Ingredients:

Azoxystrobin.....0.31%
 Propiconazole.....0.75%
 Other Ingredients.....98.94%

The following safeguards will be observed:

1. Fungicide application will be at MSLdSF Putting Greens.
2. No persons will be allowed onto treated areas until one hour after application is completed.
3. Application of fungicide will be by NMDA certified pesticide applicator, Paul Kerr (#63335).
4. Product label and safety guidelines will be followed.
5. Fungicide application will be on designated turf areas – Putting Greens.
6. Records kept will include dates, times, use rate, calibration notes and weather conditions.
7. Prior notice and signage will be posted as per IPM Ordinance.

Date(s) of Fungicide Application: **[Friday July 12, 2023]**

Action Recommended:

For your immediate review and approval.

Melissa McDonald

Approved _____

Date: 7-10-2024



PROPICONAZOLE GROUP 3 FUNGICIDE

AZOXYSTROBIN GROUP 11 FUNGICIDE

Headway[®]G

syngenta[®]

Fungicide

Broad spectrum fungicide for control of plant diseases

Not for use on turf being grown for sale or other commercial use as sod, or for commercial seed production, or for research purposes.

Active Ingredients:

Azoxystrobin ¹ :	0.31%
Propiconazole ² :	0.75%

<i>Other Ingredients:</i>	98.94%
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<i>Total:</i>	100.00%
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¹ CAS No. 131860-33-8

² CAS No. 60207-90-1

Headway G is a ready-to-use granular product that contains 0.0075 lb ai propiconazole and 0.0031 lb ai azoxystrobin per lb of product.

KEEP OUT OF REACH OF CHILDREN.

CAUTION

See additional precautionary statements and directions for use on label.

EPA Reg. No. 100-1378 EPA Est. 9198-AL-1

**Product of United Kingdom
Formulated in the USA**

PRODUCT ID

44882

30 pounds

Net Contents

®

Headway® G

FIRST AID	
If in eyes	<ul style="list-style-type: none">• 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.
If swallowed	<ul style="list-style-type: none">• Call 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.• Do not give anything by mouth to an unconscious person.
If on skin or clothing	<ul style="list-style-type: none">• 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.
If inhaled	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.• 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.	
HOT LINE NUMBER For 24-Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), Call 1-800-888-8372	

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Causes moderate eye irritation. Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber or butyl rubber
- Shoes plus socks

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.

Engineering Controls

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

User Safety Recommendations

Users should:

- 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 freshwater and estuarine/marine fish and aquatic invertebrates. Do not apply directly to water except as specified on this label. For terrestrial uses: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high-water mark. Do not contaminate water when disposing of equipment washwater or rinsate. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

Headway® G

Ground Water Advisory

The active ingredient, azoxystrobin, in this product can be persistent for several months or longer. Azoxystrobin is known to leach through soil to ground water under certain conditions as a result of label use. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

Notify state and/or federal authorities and Syngenta immediately if you observe any adverse environmental effects due to use of this product.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and (2) Buyer and User assume the risk of any such use. To the extent permitted by applicable law, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

DIRECTIONS FOR USE

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

FAILURE TO FOLLOW THE USE DIRECTIONS, RESTRICTIONS, AND PRECAUTIONS ON THIS LABEL MAY RESULT IN PLANT INJURY OR POOR DISEASE CONTROL.

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.

NON-AGRICULTURAL USES

For use to control diseases on turf on golf courses, lawns and landscape areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields.

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. The area being treated must be vacated by unprotected persons.

Do not treat areas while unprotected humans or domestic animals are present in the treatment areas. Because certain states may require more restrictive reentry intervals, consult your State Department of Agriculture for further information.

Do not enter or allow others to enter the treated area until the application is complete.

PRODUCT INFORMATION

Headway G is a combination of two broad-spectrum, preventative fungicides with systemic properties recommended for the control of many important plant diseases. All applications must be made according to the use directions that follow.

Headway® G

USE RESTRICTIONS

DO NOT graze or feed clippings from treated turf areas to animals.

DO NOT apply more than 19.2 lb product (0.144 lb propiconazole, 0.060 lb azoxystrobin) per 1000 sq ft per calendar year. Applications may be made by ground only.

DO NOT make more than 4 applications per year. For 5 lb applications of Headway G, **DO NOT** apply more than once per year.

DO NOT exceed 3 lb product per 1000 sq ft every 30 days on any variety of bermudagrass.

In Florida, **DO NOT** apply Headway G to bermudagrass golf course greens when temperatures exceed 90°F.

ATTENTION

Headway G is extremely phytotoxic to certain apple varieties.

Extreme care must be used to prevent injury to apple trees (and apple fruit).

DO NOT spread Headway G where granules may reach apple trees.

Do not apply when weather conditions favor product blowing from treated areas to non-target aquatic habitat.

INTEGRATED PEST (DISEASE) MANAGEMENT

Headway G should be integrated into an overall disease and pest management strategy whenever the use of a fungicide is required. Cultural practices known to reduce disease development should be followed. The **DIRECTIONS FOR USE** section in this label identifies specific IPM recommendations for each crop. Consult your local agricultural, turf authorities for additional IPM strategies established for your area. Headway G may be used in State Agricultural Extension advisory (disease forecasting) programs which recommend application timing based on environmental factors favorable for disease development.

RESISTANCE MANAGEMENT

PROPICONAZOLE	GROUP	3	FUNGICIDE
AZOXYSTROBIN	GROUP	11	FUNGICIDE

For resistance management, please note that Headway G contains both a Group 3/[propiconazole] and Group 11/[azoxystrobin] fungicide. Any fungal population may contain individuals naturally resistant to Headway G and other Group 3 or Group 11 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Appropriate resistance management strategies should be followed.

To delay fungicide resistance, take one or more of the following steps:

- Rotate the use of Headway G or other Group 3 or Group 11 fungicides within a growing season sequence with different groups that control the same pathogens.
- Use tank mixtures with fungicides from a different group that are equally effective on the target pest when such use is permitted. Use at least the minimum application rate as labeled by the manufacturer.
- Adopt an integrated disease management program for fungicide use that includes scouting, uses historical information related to pesticide use, and crop rotation, and which considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.
- Where possible, make use of predictive disease models to effectively time fungicide applications. Note that using predictive models alone is not sufficient to manage resistance.
- Monitor treated fungal populations for resistance development.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or IPM recommendations for specific crop and pathogens.
- For further information or to report suspected resistance contact Syngenta at 1-866-Syngent(a) (866-796-4368). You can also contact your pesticide distributor or university extension specialist to report resistance.

Resistance management strategies may include rotating or alternating with products having different modes of action or limiting the total number of applications per season. Avoid alternation with other QoIs, such as pyraclostrobin and trifloxystrobin or other DMI's such as triadimefon, fenarimol, and myclobutanil. Headway G should not be alternated with fungicides to which resistance has already developed. Continual use of Headway G may allow less sensitive strains of pathogens to increase in the population and reduce the efficacy of Headway G. Syngenta Crop Protection encourages responsible resistance management to ensure effective long-term control of the fungal diseases on this label.

APPLICATION INSTRUCTIONS

Apply Headway G at rates and timings as described in this label. Headway G may be applied with all types of spreader equipment commonly used for making ground applications excluding bellygrinder equipment. Proper adjustments and calibration of application equipment to give good coverage is essential for good disease control. The higher rates in the rate range and/or shorter application intervals may be required under conditions of heavy infection pressure, highly susceptible varieties, or when environmental conditions conducive to disease exist.

Headway® G

TURF

Headway G is recommended for control of certain pathogens causing foliar, stem, and root diseases, including leaf and stem blights, leaf spots, patch diseases, mildews, anthracnose, fairy rings, molds, and rusts of turfgrass plants. Headway G may be used to control certain diseases on turf in golf courses, lawns and landscape areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields.

Integrated Pest (Disease) Management (IPM): Sound turf management resulting in healthy, vigorous turf is the foundation of a good IPM program. Cultural practices such as proper choice of turf variety, nutrient management, proper cutting height, thatch management, and proper watering, drainage, and moisture stress management should be integrated with the use of fungicides to increase turf vigor and reduce the susceptibility to disease. Immunoassay detection kits and extension service diagnostic services can assist in the early and accurate identification of causal organisms and corresponding selection of the proper fungicide when required.

Resistance Management: Some turf disease pathogens are known to have developed resistance to products used repeatedly for their control. Headway G should be applied in an alternation program with other registered fungicides that have a different mode of action and to which pathogen resistance has not developed. Do not apply more than two sequential Headway G applications for *Pythium* spp. control. For all other diseases when *Pythium* spp. is not present, do not apply more than three sequential applications of Headway G.

Application Directions: Headway G should be applied prior to disease development. Repeat applications at specified intervals for as long as required.

ATTENTION

Bermudagrass can be sensitive to Headway G. See restrictions for bermudagrass applications in the Use Restrictions section.

For use in the establishment of turfgrass from seed or in overseeding of dormant turfgrass:

Headway G may be used for control of certain turfgrass diseases associated with turfgrass establishment from seed. Headway G may also be used during overseeding of dormant turfgrass.

Headway G may be safely applied before or after seeding or at seedling germination and emergence to ryegrass, bentgrass, bluegrass, and fescue turfgrass types. Optimum application timing is during seeding. See Application Directions section.

Rate Ranges: Use the shorter specified application interval and/or use the higher specified rate when prolonged favorable disease conditions exist.

DIRECTIONS FOR APPLICATION FOR TURF DISEASES

Not for use on turf being grown for sale or other commercial use as sod, or for commercial seed production, or for research purposes.

Target Diseases	Use Rate (lb product per 1000 sq ft)	Application Interval (days)	Application Instructions
Anthracnose (<i>Colletotrichum cereale</i>) (formerly known as <i>C. graminicola</i>)	2-2.5	14	Use preventively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development. Under high disease pressure, use higher rates of Headway G and shorter intervals. Alternate with a contact fungicide such as Daconil® (chlorothalonil).
	3.5-4	28	
Bentgrass Dead Spot (<i>Ophiosphaerella agrostis</i>)	2-2.5	14	Begin applications prior to disease development.
	3.5-4	28	
Brown Patch (<i>Rhizoctonia solani</i>) and other <i>Rhizoctonia</i> (<i>R. spp.</i>) diseases such as Large Patch, Zoysia Patch, Leaf & Sheath Spot (<i>R. zeae</i>)	2-2.5	14	Apply when conditions are favorable for disease development. For Large Patch of all warm season turfgrasses, make 1 or 2 applications in the fall prior to infection or when conditions are favorable for infection. For Zoysia Patch, make 1 or 2 applications approximately one month prior to zoysia-grass dormancy. Reapply 14 to 28 days later. For Leaf and Sheath Spot (<i>R. zeae</i>), apply when conditions are favorable for infection such as sequential or periods of temperatures at or above 90°F. Curative control may necessitate several applications.
	3.5-4	28	

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Headway® G

DIRECTIONS FOR APPLICATION FOR TURF DISEASES *(continued)*

Not for use on turf being grown for sale or other commercial use as sod, or for commercial seed production, or for research purposes.

Target Diseases	Use Rate (lb product per 1000 sq ft)	Application Interval (days)	Application Instructions
Cool Weather Brown Patch Yellow Patch (<i>Rhizoctonia cerealis</i>)	2-2.5	14	Make one or two applications in fall or when conditions are favorable for disease development.
	3.5-4	28	
Dichondra Rust (<i>Puccinia dichondrae</i>)	2-2.5	14	Apply when conditions are favorable for disease development.
	3.5-4	28	
Dollar Spot (<i>Sclerotinia homoeocarpa</i>)	2-2.5	14	Apply preventively when conditions are favorable for disease development. For non-residential turf with active Dollar Spot, use the higher rate and apply Daconil (chlorothalonil).
	3.5-4	28	
Fairy Ring (<i>Lycoperdon</i> spp., <i>Agrocybe pediades</i> , and <i>Bovistra plumbea</i>)	2-2.5	14	Apply as soon as possible after Fairy Ring symptoms develop. Irrigate with at least 0.5-inch of water within 24 hours after application if rainfall is not expected. Severely damaged or thin turf may require reseeded. Fairy Ring symptoms may take 2 to 3 weeks to disappear following application. Reapplication after 14 to 28 days may be required in some cases.
	3.5-4	28	
Gray Leaf Spot (<i>Pyricularia grisea</i>)	2-2.5	14	Use Headway G in a preventive disease control program. Begin applications before disease is present and alternate with other fungicide chemistries that control Gray Leaf Spot.
	3.5-4	28	
Gray Snow Mold Typhula blight (<i>Typhula incarnata</i>)	5	single application	Make a single application of 5 lb or two applications of 4 lb spaced 28 days apart in late fall just before snow cover. Alternating with another snow mold fungicide, such as Daconil (chlorothalonil), Medallion® (fludioxonil), Contend A+B (azoxystrobin, benzovindiflupyr, difenoconazole, propiconazole), or Instrata (chlorothalonil, fludioxonil, propiconazole) may enhance control under severe disease pressure.
	3.5-4	28	
Leaf Rust Stem Rust Stripe Rust (<i>Puccinia</i> spp.)	2-2.5	14	Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
	3.5-4	28	
Leaf Spot (<i>Bipolaris sorokiniana</i>)	2-2.5	14	Apply when conditions are favorable for disease development.
	3.5-4	21	
Melting-Out (<i>Drechslera poae</i>)	2-2.5	14	Apply when conditions are favorable for disease development.
	3.5-4	21	
Microdochium Patch (formerly known as Fusarium Patch (<i>Microdochium nivale</i>)	2-2.5	14	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
	3.5-4	28	
Necrotic Ring Spot (<i>Ophiosphaerella korrae</i>)	2-2.5	14	Apply when conditions are favorable for disease development.
	3.5-4	28	
Pink Patch (<i>Limonomyses roseipellis</i>)	2-2.5	14	Apply when conditions are favorable for disease development.
	3.5-4	28	

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Headway® G

DIRECTIONS FOR APPLICATION FOR TURF DISEASES *(continued)*

Not for use on turf being grown for sale or other commercial use as sod, or for commercial seed production, or for research purposes.

Target Diseases	Use Rate (lb product per 1000 sq ft)	Application Interval (days)	Application Instructions
Pink Snow Mold (<i>Microdochium nivale</i>)	5	Single application	Make a single application in late fall just before snow cover. Applying another snow mold fungicide, such as Daconil (chlorothalonil), Banner MAXX (propiconazole), Contend A+B (azoxystrobin, benzovindiflupyr, difenoconazole, propiconazole), or Instrata (chlorothalonil, fludioxonil, propiconazole) may enhance control under severe disease pressure.
Powdery Mildew (<i>Erysiphe graminis</i>)	2-2.5	14	Begin applications when conditions are favorable for disease infection, prior to disease symptom development.
	3.5-4	28	
Pythium Blight Pythium Root Rot (<i>Pythium aphanidermatum</i> , <i>Pythium</i> spp.)	2-2.5	14	Use preventatively. Begin applications before disease is present. During periods of prolonged favorable conditions, treat on the 10-day application interval. For use on newly seeded as well as established turf. Do not apply more than two sequential applications of Headway G for control of <i>Pythium</i> spp. For all other diseases when <i>Pythium</i> spp. is not present, do not apply more than three sequential applications of Headway G.
	3.5-4	28	
Red Thread (<i>Laetisaria fuciformis</i>)	2-2.5	14	Apply when conditions are favorable for disease development.
	3.5-4	28	
Southern Blight (<i>Sclerotium rolfsii</i>)	2-2.5	14	Apply when conditions are favorable for disease development.
	3.5-4	28	
Spring Dead Spot (<i>Ophiosphaerella korrae</i>) or (<i>Ophiosphaerella narmari</i>) or (<i>Ophiosphaerella herpotricha</i>)	2-2.5	14	Apply 1 or 2 applications approximately one month prior to bermudagrass dormancy. It is recommended to use 1/4" to 1/2" of irrigation directly after application. Reapply 14 to 28 days later.
	3.5-4	28	
Summer Patch (<i>Magnaporthe poae</i>)	2-2.5	14	Apply when conditions are favorable for disease development. Initiate applications when soil temperatures reach 65°F at a 2 inch soil depth.
	3.5-4	28	
Take-All Patch (<i>Gaeumannomyces graminis</i> var. <i>avenae</i>)	3.5-4	28	Begin applications when conditions are favorable for disease infection, prior to disease symptom development. Make two applications 28 days apart in the spring and two applications 28 days apart in the fall.

Headway G Rate Conversion Chart for Turf

Lb Product Per 1000 Sq Ft	Lb Product Per Acre	Lb Azoxystrobin Per 1000 Sq Ft	Lb Azoxystrobin Per Acre	Lb Propiconazole Per 1000 Sq Ft	Lb Propiconazole Per Acre
2	87.1	0.006	0.27	0.015	0.65
2.5	108.9	0.008	0.34	0.019	0.82
3.5	152.4	0.0109	0.47	0.026	1.14
4	174.2	0.012	0.54	0.030	1.31
5	217.8	0.016	0.68	0.038	1.63

Headway® G

STORAGE AND DISPOSAL

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

Pesticide Storage

Store in a cool, dry, secure place. Do not store near seeds, fertilizers, or foodstuffs.

Pesticide Disposal

Pesticide wastes are toxic. Improper disposal of excess pesticides, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling

Non-refillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill, or by other procedures approved by state and local authorities.

CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER!

Headway®, Banner MAXX®, Daconil®, Medallion®, the ALLIANCE FRAME
the SYNGENTA Logo and the PURPOSE ICON
are Trademarks of a Syngenta Group Company.



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For non-emergency (e.g., current product information), call
Syngenta Crop Protection at 1-800-334-9481.

Manufactured for:
Syngenta Crop Protection, LLC
P.O. Box 18300
Greensboro, North Carolina 27419-8300
SCP 1378A-L1B 0819

HEADWAY® G

Date: 7/15/2015
Replaces: 3/19/2015

1. PRODUCT IDENTIFICATION

Product identifier on label: **HEADWAY® G**
Product No.: A17869A
Use: Fungicide
Manufacturer: Syngenta Crop Protection, LLC
Post Office Box 18300
Greensboro NC 27419
Manufacturer Phone: 1-800-334-9481

Emergency Phone: 1-800-888-8372

2. HAZARDS IDENTIFICATION

Classifications: Specific Target Organ Toxicity: Respiratory Irritation Category 3
Carcinogenicity: Category 1A
Specific Target Organ Toxicity: Repeated Category 1
Signal Word (OSHA): Danger
Hazard Statements: May cause respiratory irritation
May cause cancer
Causes damage to organs through prolonged or repeated exposure

Hazard Symbols:



Precautionary Statements: Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust.
Wash hands and face thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves, protective clothing, eye protection.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If exposed or concerned: Get medical advice/attention.
Call a poison center, doctor or Syngenta if you feel unwell.
Store locked up.
Dispose of contents and container in accordance with local regulations.

Other Hazard Statements: May form combustible dust concentrations in air.

HEADWAY® G

Date: 7/15/2015
Replaces: 3/19/2015

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Common Name	CAS Number	Concentration
Wood Dust	Wood Dust	Not Applicable	Trade Secret
Other ingredients	Other ingredients	Trade Secret	<98.94%
Magnesite	Dolomitic Limestone	546-93-0	Trade Secret
Methyl (E)-2-{2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy]phenyl}-3-methoxyacrylate	Azoxystrobin	131860-33-8	0.31%
1-[[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]methyl]-1H-1,2,4-triazole	Propiconazole	60207-90-1	0.75%

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

4. FIRST AID MEASURES

Have the product container, label or Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison control center or doctor, or going for treatment.

- Ingestion:** If swallowed: Call Syngenta (800-888-8372), a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
- Eye Contact:** If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
- Skin Contact:** If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
- Inhalation:** If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call Syngenta (800-888-8372), a poison control center or doctor for further treatment advice.

Most important symptoms/effects:

Respiratory irritation

Indication of immediate medical attention and special treatment needed:

There is no specific antidote if this product is ingested.

Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

Use dry chemical, foam or CO2 extinguishing media. If water is used to fight fire, dike and collect runoff.

Specific Hazards:

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

Special protective equipment and precautions for firefighters:

Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion.

HEADWAY® G

Date: 7/15/2015
 Replaces: 3/19/2015

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures:
 Follow exposure controls/personal protection outlined in Section 8.

Methods and materials for containment and cleaning up:

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Sweep up material and place in a compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

Precautions for safe handling:

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Conditions for safe storage, including any incompatibilities:

Store locked up.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Occupational Exposure Limits:

Chemical Name	OSHA PEL	ACGIH TLV	Other	Source
Wood Dust	15 mg/m ³ TWA (total), 5 mg/m ³ (resp)	1 mg/m ³ TWA (inhalable dust)	1 mg/m ³ TWA (REL)	NIOSH
Other ingredients	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Dolomitic Limestone		Not Established	5 mg/m ³ (Respirable), 10 mg/m ³ (Total)	NIOSH
Azoxystrobin	Not Established	Not Established	4 mg/m ³ TWA	Syngenta
Propiconazole	Not Established	Not Established	5 mg/m ³ TWA	Syngenta

Appropriate engineering controls:

Use effective engineering controls to comply with occupational exposure limits (if applicable).

Individual protection measures:

Ingestion:

Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Eye Contact:

Where eye contact is likely, use dust-proof chemical goggles.

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Skin Contact:

Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear.

Inhalation:

A particulate filter respirator may be necessary until effective engineering controls are installed to comply with occupational exposure limits. Use NIOSH certified respirator with any N, R, P or HE filter. Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Brown solid

Odor: Aromatic

Odor Threshold: Not Available

pH: 6.6 (1% solution in deionized H₂O @ 77°F [25°C])

Melting point/freezing point: Not Available

Initial boiling point and boiling range: Not Applicable

Flash Point (Test Method): Not Available

Flammable Limits (% in Air): Not Available

Flammability: Not Available

Vapor Pressure: Azoxystrobin 8.25 x 10⁽⁻¹³⁾ mmHg @ 68°F (20°C)Propiconazole 4.2 x 10⁽⁻⁷⁾ mmHg @ 77°F (25°C)

Vapor Density: Not Available

Relative Density: 0.81 - 0.83 g/ml

Solubility (ies): Azoxystrobin 6 mg/l in water @ 68°F (20°C)

Propiconazole 0.1 g/l @ 68°F (20°C)

Partition coefficient: n-octanol/water: Not Available

Autoignition Temperature: Not Available

Decomposition Temperature: Not Available

Viscosity: Not Available

Other: None

10. STABILITY AND REACTIVITY

Reactivity: Not reactive.

Chemical stability: Stable under normal use and storage conditions.

Possibility of hazardous reactions: Will not occur.

Conditions to Avoid: None known.

Incompatible materials: None known.

Hazardous Decomposition Products: None known.

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11. TOXICOLOGICAL INFORMATION

Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Respiratory irritation

Delayed, immediate and chronic effects of exposure: Possible carcinogenicity, Respiratory irritation

Numerical measures of toxicity (acute toxicity/irritation studies (finished product))

Ingestion:	Oral (LD50 Female Rat) :	> 5000 mg/kg body weight
Dermal:	Dermal (LD50 Rat) :	> 5000 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	Not Available
Eye Contact:	Mildly Irritating (Rabbit)	
Skin Contact:	Slightly Irritating (Rabbit)	
Skin Sensitization:	Not a Sensitizer (Guinea Pig)	

Reproductive/Developmental Effects

Azoxystrobin : Did not show reproductive toxicity effects in animal experiments.
 Propiconazole: None observed.

Chronic/Subchronic Toxicity Studies

Azoxystrobin : No adverse effect has been observed in chronic toxicity tests.
 Propiconazole: None observed.

Carcinogenicity

Azoxystrobin : Did not show carcinogenic effects in animal experiments.
 Propiconazole: Increased hepatocellular adenomas, combined adenomas/carcinomas, and hepatocellular carcinomas observed in male mice in a chronic oral feeding study. However, animals in the high dose group for this study showed excessive toxicity; furthermore, the high dose exceeded the Maximum Tolerated Dose determined in the 90-day range finding study. No treatment-related tumors were seen in female mice in this mouse chronic feeding study. No tumors were noted in a chronic rat study.

Chemical Name	NTP/IARC/OSHA Carcinogen
Wood Dust	IARC Group 1
Other ingredients	No
Magnesite	No
Methyl (E)-2-{2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy]phenyl}-3-methoxyacrylate	No
1-[[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]methyl]-1H-1,2,4-triazole	No

Other Toxicity Information

None

Toxicity of Other Components

Dolomitic Limestone

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Exposure to limestone dust may cause irritation to the moist mucous membranes of the nose, throat, and upper respiratory system. Limestone may contain trace amounts of free crystalline silica. Prolonged exposure to respirable free silica can aggravate other lung conditions and cause silicosis, a disabling and potentially fatal lung disease.

Other ingredients
 Not Applicable

Wood Dust

Wood dust may cause mechanical irritation to the eye. Wood dust of certain species can elicit allergic contact dermatitis in sensitized individuals. Inhalation of wood dust may cause obstruction in nasal passages. May cause respiratory tract irritation.

Target Organs

Active Ingredients

Azoxystrobin : Liver
 Propiconazole: Liver

Inert Ingredients

Dolomitic Limestone: Respiratory Tract
 Other ingredients: Not Applicable
 Wood Dust : Eye, skin, nasal passages, respiratory tract

12. ECOLOGICAL INFORMATION

Eco-Acute Toxicity

Azoxystrobin :

Fish (Rainbow Trout) 96-hour LC50 470 ppb
 Green Algae 5-day EC50 106 ppb
 Invertebrate (Water Flea) 48-hour EC50 259 ppb
 Bird (Mallard Duck) 14-day LD50 > 250 mg/kg

Propiconazole:

Fish (Rainbow Trout) 96-hour LC50 0.83 ppm
 Invertebrate (Water Flea) 48-hour EC50 3.2 ppm
 Green Algae 9-day EC50 0.72 ppm
 Bird (Mallard Duck) 14-day LD50 2510 mg/kg

Environmental Fate

Azoxystrobin :

The information presented here is for the active ingredient, azoxystrobin.
 Low bioaccumulation potential. Not persistent in soil. Stable in water. Moderate mobility in soil. Sinks in water (after 24 h).

Propiconazole:

The information presented here is for the active ingredient, propiconazole.
 Low bioaccumulation potential. Not persistent in soil. Stable in water. Low mobility in soil. Sinks in water (after 24 h).

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13. DISPOSAL CONSIDERATIONS

Disposal:

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

14. TRANSPORT INFORMATION

DOT Classification

Ground Transport - NAFTA

Not regulated

Comments

Water Transport - International

Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Azoxystrobin), Marine Pollutant

Hazard Class: Class 9

Identification Number: UN 3077

Packing Group: PG III

Air Transport

Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Azoxystrobin)

Hazard Class: Class 9

Identification Number: UN 3077

Packing Group: PG III

15. REGULATORY INFORMATION

Pesticide Registration:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Caution: Causes moderate eye irritation. Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

EPA Registration Number(s):

100-1378

EPCRA SARA Title III Classification:

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: Propiconazole 0.75% (CAS No. 60207-90-1)

CERCLA/SARA 304 Reportable Quantity (RQ):

None

RCRA Hazardous Waste Classification (40 CFR 261):

Not Applicable

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TSCA Status:
Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 1
Flammability: 1
Instability: 0

HMIS Hazard Ratings

Health: 1
Flammability: 1
Reactivity: 0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme
*	Chronic

Syngenta Hazard Category: D

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 5/7/2010
Revision Date: 7/15/2015 Replaces: 3/19/2015
Section(s) Revised: 2, 4, 11, 16

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.

NOTICE

PESTICIDE APPLICATION



Target Pest:Click here to enter text.

Other Actions Attempted:Click here to enter text.

Area Treated:Click here to enter text.

Pesticide Name(s):Click here to enter text.

Active Ingredient:Click here to enter text.

Signal Word: **CAUTION/PRECAUTION**

EPA Number:Click here to enter text.

Re-Entry Period:Click here to enter text.

Integrated Pest Management Contact Info:Click here to enter text.

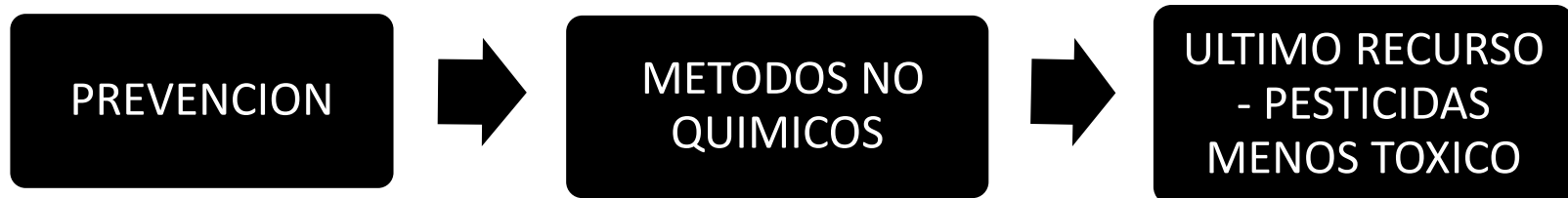
Date/Time of Application: BEFOREClick here to enter text.

Date Completed: Spray Postponed Until:Click here to enter text.



NOTIFICACION

APLICACION DE PESTICIDA



Organismo Dirigido:Click here to enter text.

Otras Acciones Tratadas:Click here to enter text.

Area Tratada:Click here to enter text.

Nombre de Pesticida(s):Click here to enter text.

Ingrediente Activo:Click here to enter text.

Señal: **Caucion/Precaucion**

Numero de EPA:Click here to enter text.

Periodo de Reingreso:Click here to enter text.

Persona encargada del Manejo de Pesticidas:Click here to enter text.

Fecha/Hora de Aplicacion: ANTES DE Click here to enter text.

Fecha de Culminacion:Click here to enter text.

