

HEADWAY® Fungicide

Emulsifiable Concentrate

COMMERCIAL

Broad-spectrum fungicide for control of turf diseases.

GUARANTEE:

Azoxystrobin 62.4 g/L
Propiconazole 103.9 g/L

**READ THE LABEL AND ATTACHED BOOKLET BEFORE USING
KEEP OUT OF REACH OF CHILDREN**

WARNING: EYE IRRITANT

REGISTRATION NO: **29295**
PEST CONTROL PRODUCTS ACT

NET CONTENTS: **0.5 L - 450 L**

Syngenta Canada Inc.
140 Research Lane, Research Park
Guelph, Ontario
N1G 4Z3
Telephone: 1-877-964-3682

LABEL

NOTICE TO USER

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

FIRST AID

IF POISONING IS SUSPECTED, IMMEDIATELY contact a physician or a poison control centre. Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

IF SWALLOWED, call a poison control centre 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 a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

IF ON SKIN OR CLOTHING, take off contaminated clothing. Rinse skin **IMMEDIATELY** with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

IF INHALED, 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 centre or doctor for further treatment advice.

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 centre or doctor for treatment advice.

TOXICOLOGICAL INFORMATION

No specific symptoms of poisoning are known for this product. If ingested, nausea, vomiting, diarrhoea and abdominal pain may occur. Treat symptomatically.

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN. HARMFUL IF SWALLOWED. Causes eye irritation. DO NOT get in eyes. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling.

Personal Protective Equipment (PPE)

For workers handling less than 750 L of HEADWAY Fungicide (equivalent to 78 kg propiconazole) per day: Wear long pants, a long sleeve shirt, shoes and socks and chemical-resistant gloves during mixing/loading, application, clean-up and repair activities.

Wear protective goggles or face shield as well as protective apron when handling the concentrated product during mixing and loading.

For commercial turf farm workers handling greater than 750 L HEADWAY Fungicide (equivalent to 78 kg propiconazole) per day: Wear coveralls over long pants, a long sleeve shirt, shoes and socks and chemical resistant gloves during mixing/loading/application, clean-up and repair activities.

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

Environmental Hazards

TOXIC to aquatic organisms and non-target terrestrial plants. Observe buffer zones specified under DIRECTIONS FOR USE.

DO NOT apply directly to freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, ditches and wetlands), estuarine or marine habitats.

The use of this chemical may result in contamination of groundwater particularly in areas where soils are permeable (e.g. sandy soil) and/or the depth to the water table is shallow.

Avoid application to areas where runoff is likely to occur. Runoff from treated areas into aquatic habitats may be hazardous to aquatic organisms. To reduce runoff from treated areas into aquatic habitats, avoid application to areas with moderate to steep slope, compacted soil, or clay.

Avoid application of this product when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

Toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application sites such as hedgerows and woodlands.

STORAGE

Keep in original container, tightly closed, during storage. Store in a cool, dry, well-ventilated area, and out of the reach of children and animals. To prevent contamination store this product away from food or feed. Keep away from fire or open flame, or other sources of heat.

SPILL CLEANUP

Wear appropriate protective equipment (gloves, glasses, apron) when attempting to clean up the spill. In case of spill on floor or paved surfaces mop up and remove to chemical waste storage area until proper disposal can be made if product cannot be used according to the label. Wash the surface or floor with detergent and water, then rinse.

If on soil, collect contaminated surface soil with the product. If the product is clean, it may be used; otherwise follow the DISPOSAL instructions.

DECONTAMINATION AND DISPOSAL

For information on disposal of unused, unwanted product, or in the case of a spill or spill clean-up, contact the manufacturer or provincial regulatory agency.

CONTAINER DISPOSAL:

For recyclable containers for commercial use:

DO NOT reuse this container for any other purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank or dispose of the rinsings in accordance with provincial requirements.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

For refillable containers commercial use:

DO NOT reuse this container for any other purpose. For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product.

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***IN CASE OF EMERGENCY INVOLVING A MAJOR SPILL, FIRE OR POISONING,
CALL 1-800-327-8633 (FASTMED)***

GROUP	3 11	FUNGICIDES
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PRODUCT INFORMATION

HEADWAY® Fungicide is a combination of two broad spectrum, preventative fungicides with systemic properties recommended for the control of many important turfgrass diseases. HEADWAY Fungicide may be applied as a foliar spray in alternating spray programs. All applications should be made according to the use directions that follow.

GENERAL USE PRECAUTIONS

DO NOT apply HEADWAY Fungicide through irrigation equipment.

DO NOT apply HEADWAY Fungicide by air.

DO NOT graze or feed clippings from the treated area to livestock.

DO NOT apply HEADWAY Fungicide with silicone-based wetting agents due to possible phytotoxicity.

When using Headway Fungicide to control Grey Snow Mould and Pink Snow Mould, **DO NOT** allow workers harvesting or transplanting treated sod to enter treated areas for 8 days. For other treatments, **DO NOT** allow workers to harvest or transplant treated sod for 6 days after application.

A restricted entry interval (REI) of 1 day is required for workers mowing, watering, cup changing, repairing irrigation systems, and doing miscellaneous grooming on golf courses. For all other activities, do not allow entry into treated areas until the area is dry.

HEADWAY Fungicide has demonstrated some phytotoxic effects when mixed with products that are formulated as EC's. These effects are enhanced if applications are made under cool, cloudy conditions and these conditions remain for several days following application.

Azoxystrobin has been shown to be extremely phytotoxic to certain apple and crabapple varieties. HEADWAY Fungicide should not be applied where there is the possibility of spray drift reaching apple and crabapple trees. **DO NOT** use sprayers used to apply HEADWAY Fungicide to spray apples or crabapples.

INTEGRATED PEST (DISEASE) MANAGEMENT

HEADWAY Fungicide 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. Consult your local turf authority for additional IPM strategies established for your area.

DIRECTIONS FOR USE

As this product is not registered for the control of pests in aquatic systems, **DO NOT** use to control aquatic pests.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning equipment or disposal of wastes.

DO NOT use in greenhouses.

This product is not to be used around homes or other residential areas such as parks, school grounds, playing fields. It is not for use by homeowners or other unlicensed users.

DO NOT allow entry into treated areas until the area is dry.

Field sprayer application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification. Boom height must be 60 cm or less above the crop or ground.

Buffer zones

Use of the following spray methods or equipment **DO NOT** require a buffer zone: hand-held or backpack sprayer and spot treatment.

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands), sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Method of Application	Crop	Buffer Zones (metres) Required for the Protection of:				
		Freshwater Habitat of Depths:		Estuarine/Marine Habitats of Depths:		Terrestrial Habitat
		Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m	
Field Sprayer ¹	Turf, golf courses	3	1	4	2	4

¹ For field sprayer application, buffer zones can be reduced with the use of drift reducing spray shields. When using a spray boom fitted with a full shield (shroud, curtain) that extends to the crop canopy, the labelled buffer zones can be reduced by 70%. When using a spray boom where individual nozzles are fitted with cone-shaped shields that are no more than 30 cm above the crop canopy, the labelled buffer zone can be reduced by 30%.

For tank mixes, consult the labels of the tank mix partners and observe the largest (most restrictive) buffer zone of the products involved in the tank mixture and apply using the coarsest spray (ASAE) category indicated on the labels for those tank mix partners.

TURF: Golf Courses, Commercial Turf Farms - For control of Dollar Spot, Anthracnose, Red Thread, Brown Patch, Waitea Patch, Leaf Spots and Melting-Out, Summer Patch, Grey Snow Mould and Pink Snow Mould, Fusarium Patch, *Pythium* blight and Fairy Ring. Refer to the following table to determine the appropriate use rate and application interval by target disease.

DO NOT apply more than 430 mL product/100 m²/year (43 L product/ha/year).

Disease	Product Rate (mL/100 m ²)	Application Interval (days)	Instructions
Dollar Spot (<i>Sclerotinia homeocarpa</i>)	38 - 77	14 - 21	Use preventatively. Apply when conditions are favorable for disease development. Use the higher rate under severe disease pressure. During prolonged periods of favourable conditions apply on the shorter application interval.
Anthracnose (<i>Colletotrichum graminicola</i>)	38 - 77	14 - 21	Use preventatively. Begin applications when conditions are favorable for disease infection, prior to disease symptom development. Use the higher rate under severe disease pressure. During prolonged periods of favourable conditions apply on the shorter application interval.

Disease	Product Rate (mL/100 m ²)	Application Interval (days)	Instructions
Red Thread (<i>Laetisaria fuciformis</i>)	77	14	Apply when conditions are favorable for disease development. Prolonged periods of high humidity air favour the development of the disease.
Brown Patch (<i>Rhizoctonia solani</i>)	48	14	Begin applications before disease is present when conditions are favorable for disease development (high surface moisture or humidity and warm night temperatures).
Waitea Patch (<i>Waitea circinata</i> var. <i>circinata</i>)	48 - 96	14 - 28	Apply when conditions are favourable for disease development, i.e., warmer temperatures between 20 to 30 °C and during periods of high humidity and extended leaf wetness. Use the higher rate and shorter application interval under moderate to severe disease pressure. During prolonged periods of favourable conditions apply on the shorter application interval. DO NOT apply more than 2 sequential applications of HEADWAY Fungicide before alternating with a fungicide with a different mode of action (if alternation is not possible, a maximum of 2 applications is permitted).
Leaf Spots and Melting-Out (<i>Bipolaris sorokiniana</i> , <i>Dreschlera poae</i>)	48 - 96	14 - 28	Apply when conditions are favorable for disease development. Use the higher rate under severe disease pressure. During prolonged periods of favourable conditions apply on the shorter application interval.
Summer Patch (<i>Magnaporthe poae</i>)	48 - 96	14 - 28	Apply HEADWAY Fungicide on a preventative basis. The first application should be when the soil temperature is greater than 16°C at a 5 cm depth for 4 consecutive days with a second application 30 days later. A third application may be required if hot, humid weather occurs.
Grey Snow Mould (<i>Typhula incarnate</i> , <i>T. iskikariensis</i>) and Pink Snow Mould (<i>Microdochium nivale</i>)	308	one fall application	Apply one application in the late fall before snow cover. Do not apply on top of snow or when the temperature is below 0°C.
Fusarium Patch (<i>Microdochium nivale</i>)	48 - 96	14 - 28	Use preventatively. Begin applications when conditions are favorable for disease development, i.e., extended period of cool (<15.5°C) and wet weather in spring and fall. Use the higher rate under severe disease pressure. During prolonged periods of favourable conditions apply on the shorter application interval.

Disease	Product Rate (mL/100 m ²)	Application Interval (days)	Instructions
Pythium blight (<i>Phythium aphanidermatum</i>)	96	10 - 14	Use preventatively. Begin applications when conditions are favorable for disease infection, i.e., relative humidity greater than 90% for at least 9 hours, maximum daily temperature of 28°C and low temperature of 20°C. During prolonged periods of favourable conditions apply on the shorter application interval.
Fairy Ring (<i>Basidiomycete</i> , including <i>Lycoperdon</i> spp.)	96	28	Apply as soon as possible after fairy ring symptoms develop. Severely damaged or thin turf may require reseeding. Fairy ring symptoms may take 2 to 3 weeks to disappear following application. Reapplication after 28 days may be required.

HEADWAY Fungicide Rate Conversion Chart for Turf

Amount of HEADWAY Fungicide (mL) required for each 100 L of spray solution at selected rates and target application volumes:

Rate of HEADWAY Fungicide (mL/100 m ²)	Target Application Volume (L/100 m ²)			
	4	8	12	16
38	950	475	317	238
48	1200	600	400	300
77	1925	963	642	481
96	2400	1200	800	600
308	7700	3850	2567	1925

Rate of HEADWAY Fungicide (L/ha)	Target Application Volume (L/ha)			
	400	800	1200	1600
3.8	950	475	317	238
4.8	1200	600	400	300
7.7	1925	963	642	481
9.6	2400	1200	800	600
30.8	7700	3850	2567	1925

Examples:

- 1) If the intended rate of application is 38 mL/100 m², and the sprayer is calibrated to deliver 12 L/100 m², a 100 L batch size would require 317 mL of HEADWAY Fungicide.
- 2) If the intended rate of application is 3.8 L/ha, and the sprayer is calibrated to deliver 800

L/ha, each 100 L of spray solution would require 475 mL of HEADWAY Fungicide.

MIXING INSTRUCTIONS

To prepare spray solution, partially fill the spray tank with clean water and begin agitation. Add the specified amount of HEADWAY Fungicide to the tank, allowing time for good dispersion, and then add an adjuvant, if recommended. Finish filling the tank to the desired volume to obtain the proper spray concentration. Maintain agitation throughout the spraying operation. Do not allow spray mixture to stand overnight or for prolonged periods. If spray-tank mixture is unsprayed for more than 18 hours (overnight), re-suspend product with agitation for 20 minutes. Make up only the amount of spray required for immediate use. Sprayers should be thoroughly cleaned immediately after application. Do not use silicone-based products with HEADWAY Fungicide due to possible phytotoxicity.

HEADWAY Fungicide may be applied with all types of spray equipment commonly used for making ground applications. Do not apply HEADWAY Fungicide through any type of ultra low volume (ULV) spray system (less than 10 L/ha). Proper adjustments and calibration of spraying equipment to give good canopy penetration and coverage is essential for good disease control. The higher rates in the rate range and/or shorter spray intervals may be required under conditions of heavy infection pressure, highly susceptible varieties, or when disease-conducive environmental conditions exist.

Apply HEADWAY Fungicide in sufficient water volume for adequate coverage.

RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, please note that HEADWAY Fungicide contains a Group 3 and Group 11 fungicide. Any fungal population may contain individuals naturally resistant to HEADWAY Fungicide and other Group 3 and 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. Other resistance mechanisms that are not linked to site of action but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay fungicide resistance:

HEADWAY Fungicide 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 (2) applications before applying one (1) application of a fungicide of a different group with a different mode of action.

Fungicide use should be based on an IPM program that includes scouting, historical information related to pesticide use and crop rotation and considers cultural, biological and other chemical control practices.

Monitor treated fungal populations for sign of resistance development.

If disease continues to progress after treatment with this product, do not increase the use rate. Discontinue use of this product, and switch to another fungicide with a different target site of action, if available.

Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens in your area.

For further information or to report suspected resistance, contact company representatives at 1-87-SYNGENTA (1-866-974-3682) or at www.syngenta.ca.

HEADWAY® is a trademark of a Syngenta Group Company.