



## Impala Fungicide

For Broad Spectrum Control of Fungal Diseases in Turf

### Technical Brief

<b>Active Ingredients:</b>	96 g/L azoxystrobin 194 g/L triticonazole
<b>Chemical Family:</b>	Methoxy acrylate (azoxystrobin) Triazole (triticonazole)
<b>FRAC Code:</b>	11 - Quinone outside Inhibitors [Qols] (Azoxystrobin) 3 - DMI (Triticonazole)
<b>Formulation:</b>	Suspension Concentrate (SC)
<b>Mode of Action:</b>	Azoxystrobin is a member of the strobiluron fungicide group (Qols). It acts on the fungal pathogen outside and inside the plant at the early stages of infection and stops disease development by interfering with ATP biosynthesis in fungal mitochondria.  Triticonazole is a member of the DMI group, and the triazole chemical family. Triticonazole disrupts cell membrane function in the sterol biosynthesis pathway which results in abnormal fungal growth and eventually death.
<b>Behaviour in Plants:</b>	Azoxystrobin is a xylem systemic fungicide that delivers excellent protection for up to 28 days against a wide spectrum of turf diseases. Azoxystrobin is absorbed by the leaves and crowns of the plant, mostly within 24-48 hours of treatment. Absorption through roots (after application to the root zone) normally happens over time and is facilitated by soil moisture. It is transported acropetally (upwards) in the xylem. This combination of systemic translocation and translaminar movement contributes to even distribution and longevity of the active ingredient within the plant tissue.  Triticonazole is absorbed by the leaf, crown and roots. Acropetal penetrant; provides both contact and upward systemic activity (Xylem systemic - moves upwards in the xylem). Both protective and curative as well as having contact and xylem systemic properties.

### Benefits

- New active constituent triticonazole brings higher efficacy from the DMI-triazole family.
- The only dual systemic turf fungicide that contains the highly regarded active constituent triticonazole.
- Broad spectrum control of over 10 major turf diseases.
- Allows for excellent flexibility for diseases attacking leaves, crowns and roots.
- Is highly rainfast and quickly absorbed by leaves, crown and roots of treated turf.
- Fungal activity ceases quickly when applied as a curative application.
- Consistent protection of new growth for up to 28 days after application.
- Low poison schedule (Schedule 5 – CAUTION)
- Leaf and Crown diseases – when applied both active constituents will deposit on leaves and accumulate in crowns, thus ensuring optimal positioning for systemic redistribution, even to new growth.
- Root diseases – when applied both active constituents will give crown accumulation and root zone uptake. This will also ensure systemic redistribution through the entire plant.
- Azoxystrobin is the only strobilurin (Qols) that can protect new growth through systemic movement (xylem systemic) for up to 28 days after the initial application. Excellent longevity on the leaf surface for prevention of spore germination and infection.
- Triticonazole gives significant root uptake when washed in after application. It will protect new growth through systemic movement (xylem systemic) when absorbed in crowns and through roots and can be redistributed through dispersion to all tissues.

### Compatibility

DO NOT mix with products or fertiliser with high salt content, i.e. ferrous sulphate or ammonium sulphate. As formulations of other manufacturers' products are beyond the control of Turf Culture Pty Ltd, all mixtures should be tested prior to mixing commercial quantities.

### How to get the most out of your application

- Begin applications before symptoms occur when conditions first favour disease and continue applications while conditions remain favourable for disease development.
- Apply in 350 - 1000L of water per ha (volume is dependent on target disease, see application section of label).
- Preventative use dictates that applications begin when conditions are favourable for disease infection and at the very beginning of disease infection.

## Disease Management

Situation	Disease	Rate	Critical Comments
Turf	Anthracnose ( <i>Colletotrichum graminicola</i> ), Brown Patch ( <i>Rhizoctonia solani</i> ), Grey Leaf Spot ( <i>Pyricularia grisea</i> ), Helminthosporium Disease ( <i>Bipolaris spp</i> , <i>Drechslera spp</i> , <i>Exserohilum spp</i> ), Take-All Patch ( <i>Gaeumannomyces graminis var. avenae</i> ), Fusarium ( <i>Fusarium nivale</i> , <i>Microdochium nivale</i> )	6 L/ha  Or  60 mL /100 m <sup>2</sup>	Begin applications before symptoms occur when conditions first favour disease and continue applications while conditions remain favourable for disease development.  Apply no more than 2 consecutive Impala Fungicide applications at 28 day intervals for all diseases.  Apply Impala Fungicide in a preventative fungicide program containing fungicides from different Mode of Action Groups.
	Dollar Spot ( <i>Sclerotinia homoeocarpa</i> )		Begin applications before symptoms occur when conditions first favour disease and continue applications while conditions remain favourable for disease development. Apply no more than 2 consecutive Impala Fungicide applications at 21 day intervals for Dollar Spot. Apply Impala Fungicide in a preventative fungicide program containing fungicides from different Mode of Action Groups.
	Fairy Ring ( <i>Basidiomycetes spp.</i> )		Apply preventatively when conditions are favorable for disease development or as an early curative as soon as possible after first symptoms are detected. Make a second application 21 days later. Apply no more than 2 consecutive Impala Fungicide applications at 28-day intervals for all diseases. Apply Impala Fungicide in a preventative fungicide program containing fungicides from different Mode of Action Groups
	Pythium Leaf Blight, Pythium Root Rot, Seedling Damping Off ( <i>Pythium spp</i> )		Begin applications before symptoms occur when conditions first favour disease and continue applications while conditions remain favourable for disease development. Apply no more than 2 consecutive Impala Fungicide applications at 14 to 21 day intervals for Pythium. In high pressure curative situations use a suitable curative fungicide first and then follow up with Impala Fungicide. Apply Impala Fungicide in a preventative fungicide program containing fungicides from different Mode of Action Groups.
	<b>Ectotrophic Root Infecting Fungi (ERI)</b> Spring Dead Spot ( <i>Ophiosphaerella narmari</i> ), Take-all Patch ( <i>Gaeumannomyces graminis var. avenae</i> )		<b>Autumn strategy</b> <b>Preventative applications:</b> Spray in January to April, after renovation and recovery of active growth. Make a second application 1 month later. DO NOT renovate treated greens until active growth has recommenced in Spring. Refer to Application sections for detailed information.
	<b>Ectotrophic Root Infecting Fungi (ERI)</b> Couchgrass Decline ( <i>Gaeumannomyces graminis var. graminis</i> ), Take-all Patch ( <i>Gaeumannomyces graminis var. avenae</i> )		<b>Spring and summer strategy</b> <b>Preventative applications:</b> Spray in September to November, after renovation and recovery of active growth. Make a second application 1 month later. <b>Early curative applications:</b> Spray as soon as possible after first symptoms are detected. Make a second application 1 month later. Refer to Application section for detailed information.

Note: The above table represents only a modified extract from the full registered label. Always read the full product label before use.

## Application

Ensure even application in order to achieve even disease control. Avoid overlapping sprays.

**Leaf and Crown Diseases:** Application volume for leaf and crown infecting diseases (Anthracnose, Brown Patch, Dollar Spot, Grey Leaf Spot, Helminthosporium diseases, Pythium Blight, and Fusarium) should be adequate to ensure thorough and even coverage of the turf leaves and penetration to the crowns. Ideal application volume should be 350 to 500 L/ha. Example: For best results use medium [e.g. XR Teejet\* (11004 or 11005)] to coarse [e.g. Turbo Teejet\* or AIXR Teejet\* (11004 or 11005)] nozzles, at 5 km/h and 3 bar pressure. In higher cut turf (≥ 15 mm) a significant spray shielding effect can occur, impacting negatively on spray penetration and even coverage at low application volumes.

**Root Diseases:** Application volumes for root infecting diseases (Brown Patch, Couchgrass Decline, Fairy Ring, Pythium Root Rot, Spring Dead Spot and Take-all Patch) should be as high as possible (approximately 1000 L/ha) to ensure placement close to the soil surface. When lower application volumes are used, washing in should commence as soon as possible after application. Example: For best results use extremely coarse droplets [e.g. Turbo Floodjet (TF5) or TurfJet (TTJ10)] and total application volume of approximately 1000 L/ha. Preferably spray onto wet or dewy grass. Irrigate with 6 to 10 mm of water commencing within 1 hour of application.



**Packaging** Pack sizes: 1 L, 5 L