

CAUTION
KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING



Astro 250 EC

Growth Regulator

ACTIVE CONSTITUENT: 250 g/L TRINEXAPAC-ETHYL
SOLVENT: 481.5 g/L AROMATIC HYDROCARBON
100 g/L METHYL-PYRROLIDONE

**For the Reduction of Leaf and Stem Growth of Grass Species, as an
Aid in Turf Management, and as an Aid in Winter Grass
Management**

IMPORTANT: READ THIS LEAFLET BEFORE USING THIS PRODUCT

APVMA Approval No.: 64369/110768



Turf Culture Pty Ltd
ACN: 117 986 615
43 Gap Road
Sunbury Vic 3429
Ph: 1300 11 8873
(Ph: 1300 11 TURF)
www.turfculture.com.au

DIRECTIONS FOR USE

Restraints

DO NOT use on bowling greens.

DO NOT apply to turf recovering from wear, renovation or turf affected by disease, waterlogging or other stresses.

DO NOT use where growth regulatory effects are likely following the application of a fungicide or any other material.

DO NOT apply to turf going into or coming out of dormancy.

DO NOT apply if rainfall is expected within 1 hour, and **DO NOT** irrigate for at least 1 hour after application.

DO NOT apply to Kentucky Bluegrass as damage may occur.

Turf Growth Management (Growth Regulation)

Situation	Grasses	Rate		Critical Comments
		Low Volume Spray /ha	Knapsack Application per 100 m ²	
Golf course greens	Bent grass	500 mL to 1 L	5 to 10 mL	<p>Apply Astro 250 EC Growth Regulator at least 6 hours before or after mowing and when turf is actively growing.</p> <p>Use the lower rates on turf with moderate growth rates where a lower level of growth reduction is required or when used in a program.</p> <p>Apply rates towards the higher end of the rate range when growth is vigorous or when longer periods of up to 6 weeks suppression is required.</p> <p>Application made to turf growing under cool conditions or to turf with low nutrient levels or where growth rates are low may result in discolouration.</p> <p>Well-maintained lawns and turf surfaces are those that receive at least weekly mowing and good levels of water and fertility are maintained.</p> <p>Refer to Application section for detailed information.</p>
Golf course fairways	Common Couch	400 to 800 mL	4 to 8 mL	
	Couch varieties: Greenlees Park, Wintergreen, Santa ana	300 to 600 mL	3 to 6 mL	
	Fescue, Perennial Ryegrass	800 mL to 1.5 L	8 to 15 mL	
	Kikuyu, Carpet grass	800 mL to 2 L	8 to 20 mL	
Golf course short roughs, well-maintained lawns and turf surfaces	Buffalo grass, Common Couch, Hybrid Couch	500 mL to 1 L	5 to 10 mL	
	Fescue, Perennial ryegrass, Bent grass	1 to 2 L	10 to 20 mL	
	Kikuyu	800 mL to 3 L	8 to 30 mL	
Golf course long roughs, parks, ovals, lawns, general grassed areas	Buffalo grass, Common Couch, Hybrid Couch	500 mL to 2 L	5 to 20 mL	
	Fescue, Perennial ryegrass, Bent grass	1 to 3 L	10 to 30 mL	
	Kikuyu	1 to 4 L	10 to 40 mL	

Turf Growth Management (Growth Regulation) *continued*

Situation	Grasses	Rate		Critical Comments
		Low Volume Spray /ha	Knapsack Application per 100 m ²	
Bunker facing, path and garden edging, footpath and curbside, fencelines and around trees	Buffalo grass	2 L	20 mL	Apply Astro 250 EC Growth Regulator at least 6 hours before or after mowing and when turf is actively growing. On difficult to mow areas apply Astro 250 EC Growth Regulator to actively growing turf and mow 3 to 4 days after application. Apply in a strip about 25 to 50 cm wide. Use the lowest rate of Astro 250 EC Growth Regulator around bunker edges and the highest rates in the other situations. Application made to turf growing under cool conditions or to turf with low nutrient levels or where growth rates are low may result in discolouration.
	Couch varieties: Greenlees Park, Wintergreen, Santa ana			
	Common Couch, Perennial ryegrass, Bent grass	2 to 3 L	20 to 30 mL	
	Kikuyu	3 to 4 L	30 to 40 mL	

Winter Grass (*Poa annua*) Management

Situation	Grasses	Rate		Critical Comments
		Low Volume Spray/ha	Knapsack Application/ 100 m ²	
Golf course fairways or Bent grass golf greens	Winter Grass (<i>Poa annua</i>)	200 to 500 mL	2 to 5 mL	See instructions under <i>Poa annua</i> Management for reduction of <i>Poa annua</i> swards in Bent Grass golf greens. See Critical Comments aligned with Golf course greens situation/use for application recommendations.

NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION

WITHHOLDING PERIOD

DO NOT graze treated turf/lawn, or feed turf/lawn clippings from any treated area to poultry or livestock.

GENERAL INSTRUCTIONS

Astro 250 EC Growth Regulator should be applied to actively growing turf, at least 6 hours before or after mowing. Good mowing management leading up to application is required to achieve a good quality turf surface and to obtain the best results from Astro 250 EC Growth Regulator.

Turf Growth Management (Growth Regulation)

The recommended use rates are designed to give approximately a 20 to 50% reduction in clippings over a 2 to 6 week period. Full growth regulation by Astro 250 EC Growth Regulator begins about 3 to 5 days after application. In practise the amount of growth reduction achieved will vary between situations due to environmental conditions and management practices. To some extent therefore application rates will need to be adjusted to match growing conditions, management practises and the amount of growth regulation required by the turf manager.

Repeat applications can be made as soon as turf resumes growth or more suppression is required.

Areas treated with Astro 250 EC Growth Regulator should continue to receive regular maintenance practises, including irrigation, fertilisation, and weed, disease and insect control where necessary, as recommended for quality turf.

Winter Grass (*Poa annua*) Management

Different grasses vary in their sensitivity to Astro 250 EC Growth Regulator. Since *Poa annua* is more sensitive to Astro 250 EC Growth Regulator than Bent grass, Astro 250 EC Growth Regulator can be used to reduce the competitiveness of *Poa annua* in Bent grass golf greens. Astro 250 EC Growth Regulator can be integrated into existing *Poa annua* control programs. Low rates of Astro 250 EC Growth Regulator (that provide growth suppression of *Poa annua*, but not Bent grass) applied during peak growth periods may enable a slow transition in the golf green sward composition away from *Poa annua* and towards higher percentage of Bent grass.

Mixing

Add the required quantity of Astro 250 EC Growth Regulator directly to a spray tank containing 2/3 of the required spray volume. Add the rest of the water and ensure the mix is thoroughly agitated before application.

Application

Ensure even application in order to achieve even growth reduction. Avoid overlapping sprays.

Application Volume: Apply in 100 to 400 L/ha water using suitable flat fan nozzles. Application volume should be adequate to ensure thorough and even coverage of the turf leaves and penetration to the crowns. In higher cut turf (>15 cm) a significant spray shielding effect can occur, impacting negatively on spray penetration and even coverage at low application volumes.

Knapsack: It is important to apply the correct quantity of Astro 250 EC Growth Regulator to a known area of turf. The water volume used is not as important providing good coverage is achieved. Apply between 2 and 10 L of water per 100 m² of turf. Preferably use flat fan nozzles and ensure even coverage is achieved.

Golf Course Greens: Ensure product placement as uniformly as possible onto leaves and into crowns. Ideal application volume should be 350 to 500 L/ha. For best results use medium [XR Teejet* (11004 or 11005)] to coarse [Turbo Teejet* or AIXR Teejet* (11004 or 11005)] nozzles, at 5 km/h and 3 bar pressure. Boom height should not exceed 50 cm above the ground.

All Other Turf Areas: Ensure product placement as uniformly as possible onto leaves and into crowns. Ideal application volume should be 200 to 500 L/ha. For best results use medium [XR Teejet (11004 or 11008)] to coarse [Turbo Teejet or AIXR Teejet (11004 or 11005)] nozzles, at 8 km/h and 3 bar pressure. Boom height should not exceed 50 cm above the ground

Compatibility

Astro 250 EC Growth Regulator is compatible with Azoxy 95 Fungicide and Thumper Insecticide.

For Common Couch, Hybrid Couch, and Kikuyu turf grasses only:

Astro 250 EC Growth Regulator is compatible with some formulations of products containing the following chemicals:

MCPA ester/bromoxynil, MCPA/bromoxynil/dicamba, bromoxynil, MCPA ester/bromoxynil/dicamba, MCPP/2,4-D amine/dicamba, 2,4-D amine, MCPP/2,4-D amine/dicamba or MCPP/dicamba. However, some transient discolouration of the treated turf may occur, after application of a tank mix.

For the treatment of broadleaf weeds in turf with herbicides other than those indicated above, it is recommended to apply Astro 250 EC Growth Regulator and the broadleaf weed herbicides separately, allowing at least 10 days between an application of Astro 250 EC Growth Regulator and the broadleaf weed herbicides.

PRECAUTIONS

Re-entry Period

DO NOT enter treated areas, without protective clothing until spray has dried.

DO NOT allow the public to enter treated areas until spray has dried.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Dangerous to fish larvae and oysters. DO NOT contaminate dams, rivers, streams or storm water drains with concentrate or used container. Wash out spraying equipment, mixing and measuring utensils with water onto grass.

STORAGE AND DISPOSAL

Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight. Triple-rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point.

If not recycling, break, crush or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.

For refillable containers

Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

SAFETY DIRECTIONS

Harmful if inhaled or swallowed. Will irritate the eyes and skin. Repeated exposure may cause allergic disorders. Avoid contact with the eyes and skin. When opening the container, preparing spray and using prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and face shield or goggles.

If product on skin, immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands arms and face thoroughly with soap and water. After each day's use, wash gloves, face shield or goggles and contaminated clothing.

FIRST AID INSTRUCTIONS

If poisoning occurs, contact a doctor or Poisons Information Centre. *Phone Australia 13 11 26*. If swallowed DO NOT induce vomiting. Give a glass of water.

SAFETY DATA SHEET

For further information refer to the Safety Data Sheet (SDS), which is available from the supplier or from the manufacturer's website: www.turfculture.com.au

CONDITIONS OF SALE

The use of Astro 250 EC Growth Regulator being beyond the control of the manufacturer, no warranty expressed or implied is given by Turf Culture Pty Ltd regarding its suitability, fitness or efficiency for any purpose for which it is used by the buyer, whether in accordance with the directions or not and Turf Culture Pty Ltd accepts with no responsibility for any consequences whatsoever resulting from the use of this product.

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In a Transport Emergency Dial 000 Police or Fire Brigade