

**DANGER – CORROSIVE, ECOTOXIC**  
**Keep Out of Reach of Children**  
**Read Label Before Use**



# **Astro 250 EC NZ**

## **Growth Regulator**

**Active ingredient:** Contains 250 g/litre TRINEXAPAC-ETHYL in the form of an emulsifiable concentrate

**A plant growth regulator for the Reduction of Leaf and Stem Growth of Grass Species and as an Aid to Turf Management**

Approved pursuant to the HSNO Act 1996, Approval Code HSR100680  
See [www.epa.govt.nz](http://www.epa.govt.nz) for approval conditions

**Ecotoxic herbicide. Not for use in home gardens.**

**IMPORTANT: READ THIS LEAFLET BEFORE OPENING OR USING THIS PRODUCT**

<b>NZ Supplier Contact:</b> PGG Wrightson Turf Ltd 31 Allright Place, Mt Wellington Auckland, New Zealand Ph: +64 09 570 2570 Fax: +64 09 570 4064 <a href="http://www.pggwrightsonturf.co.nz">www.pggwrightsonturf.co.nz</a>	Turf Culture Pty Ltd ACN: 117 986 615 43 Gap Rd Sunbury Vic 3429 Australia Ph: +61 1300 11 8873 Fax: +61 3 8888 9991 <a href="http://www.turfculture.co.nz">www.turfculture.co.nz</a>
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**NZ Emergency Number: 0800 764 766 (0800 POISON)**

**HSNO CLASSIFICATION**

3.1D, 6.3B, 8.3A, 9.1A, 9.2D



Eye Corrosive



Ecotoxic

**HAZARDS****Danger** - Combustible liquid.**Warning** - Causes mild skin irritation. Causes serious eye damage.**Ecotoxic** - Very toxic to aquatic life with long lasting effects. Harmful to the soil environment.**APPROVED HANDLER**

This product must be under the control of an approved handler during use. Use of this product in any manner contrary to this label may be an offence under the HSNO Act.

**PRECAUTIONS**

Keep out of reach of children. Read label before use. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

**STORAGE:** Store in a well-ventilated place. Keep cool.

**Container disposal:** Ensure the container is empty. Triple rinse empty container and add residue to spray tank. If recycling, replace cap and return clean containers to recycler or designated collection point (0800 247 326, [www.agrecovery.co.nz](http://www.agrecovery.co.nz)). Alternatively, if allowed under local Authority District Plans, burn if circumstances, especially wind direction permit, otherwise crush and bury in an approved local authority facility. DO NOT reuse this container for any other purpose.

**Product Disposal:** Disposal of this product only by using according to this label, or at an approved landfill or other approved facility.

Turf Culture Astro 250 EC NZ Growth Regulator must not be applied onto or into water.

Turf Culture Astro 250 EC NZ Growth Regulator must be applied via ground-based methods only.

Turf Culture Astro 250 EC NZ Growth Regulator must not be used on or around food or feed crops.

## GENERAL INFORMATION

Turf Culture Astro 250 EC NZ Growth Regulator (hereinafter called 'Astro 250 EC NZ Growth Regulator') is absorbed by the leaves and stems of turf species. Astro 250 EC NZ Growth Regulator has no root or soil activity. Astro 250 EC NZ Growth Regulator is absorbed quickly into the plant tissue and rapidly translocated to the growing parts where the elongation of the stem internodes is inhibited thereby reducing the plant height.

Astro 250 EC NZ Growth Regulator is rainfast within 2 hours of application.

## DIRECTIONS FOR USE

### Restrains:

DO NOT apply onto or into water.

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 other material.

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

DO NOT apply to Wintergrass (*Poa annua*) or Kentucky Bluegrass (*Poa pratensis*) as damage may occur.

This product must only be applied using ground based methods.

### Application rates and treatment intervals

Maximum application rate: 1L - 4L/ha as shown in Turf Growth Management Table

Minimum interval between treatments: 28 days (at 4L/ha), 14 days (at 2L/ha), 7 days (at 1L/ha).

Maximum treatment frequency: 7 times per year.

## TURF GROWTH MANAGEMENT

Situation	Grasses	Rate		Critical Comments
		Low Volume Spray/ha	Knapsack Application/100m <sup>2</sup>	
Golf greens	Bent grass	500 mL to 1.0 L	5 to 10 mL	Apply Astro 250 EC NZ Growth Regulator at least 6 hours before or after mowing and when turf is actively growing.
	Hybrid Couch	70 – 290 mL	0.7 – 2.9 mL	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. 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. 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. Well-maintained lawns and turf surfaces are those that receive at least weekly mowing and good levels of water and fertility are maintained.

Situation	Grasses	Rate		Critical Comments
		Low Volume Spray/ha	Knapsack Application/100m <sup>2</sup>	
Golf course fairways	Common couch	400 - 800 mL	4 - 8 mL	<p>Apply Astro 250 EC NZ 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>
	Couch varieties: Greenlees Park, Wintergreen, Santa Ana	300 - 600 mL	3 - 6 mL	
	Fescue, Perennial Ryegrass	800 mL - 1.5 L	8 - 15 mL	
	Kikuyu	800 mL - 2.0 L	8 – 20 mL	
	Carpet grass			
Golf course short roughs, well maintained lawns and turf surfaces	Buffalo grass	500 mL - 1.0 L	5 – 10 mL	<p>Apply Astro 250 EC NZ 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>
	Common Couch, Hybrid couch			
	Fescue, Perennial ryegrass, Bent grass	1.0 L - 2.0 L	10 – 20 mL	
	Kikuyu	800 mL - 3.0 L	8 – 30 mL	
Golf course long roughs, parks, ovals, lawns, general grassed areas	Buffalo grass	500 mL - 2.0 L	5 – 20 mL	<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>
	Common Couch, Hybrid couch			
	Fescue, Perennial ryegrass, Bent grass	1.0 - 3.0 L	10 – 30 mL	
	Kikuyu	1.0 – 4.0 L	10 - 40 mL	

Situation	Grasses	Rate		Critical Comments
		Low Volume Spray/ha	Knapsack Application/100m <sup>2</sup>	
Bunker facing, path and garden edging, footpath and curbside, fencelines and around trees	Buffalo grass	2.0 L	20 mL	<p>Apply Astro 250 EC NZ 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>
	Common varieties: Greenlees Park, Wintergreen, Santa Anna			
	Common Couch, Perennial ryegrass, Bent grass	2.0 - 3.0 L	20 - 30 mL	
	Kikuyu	3.0 – 4.0 L	30 - 40 mL	

#### WINTER GRASS (*Poa annua*) MANAGEMENT

Situation	Grasses	Rate		Critical Comments
		Low Volume Spray/ha	Knapsack Application/100m <sup>2</sup>	
Golf Course Fairways or Bentgrass Golf Greens	Wintergrass ( <i>Poa annua</i> )	200 - 500 mL	2 to 5 mL	<p>Different grasses vary in their sensitivity to Astro 250 EC NZ Growth Regulator. Since <i>Poa annua</i> is more sensitive to Astro 250 EC NZ Growth Regulator than Bent grass, Astro 250 EC NZ Growth Regulator can be used to reduce the competitiveness of <i>Poa annua</i> in Bent Grass golf greens.</p> <p>Astro 250 EC NZ Growth Regulator can be integrated into existing <i>Poa annua</i> control programs. Low rates of Astro 250 EC NZ Growth Regulator (that provide growth suppression of <i>Poa annua</i>, but not Bent Grass) applied during peak growth periods may enable a slow transition in golf green sward composition away from <i>Poa annua</i> and towards a higher percentage of Bent Grass.</p>

#### WITHHOLDING PERIOD:

**DO NOT GRAZE TREATED TURF/LAWN, OR FEED TURF/LAWN CLIPPINGS FROM ANY TREATED AREA TO POULTRY OR LIVESTOCK**

#### EQUIPMENT

Astro 250 EC NZ Growth Regulator must only be applied with conventional ground spraying equipment.

#### COMPATIBILITY

Astro 250 EC NZ Growth Regulator is compatible with commonly used fungicides and herbicides in turf. **Note:** an increase in effect may occur if applied in mixture with triazole fungicides under conditions of rapid vegetative growth. The application timing of herbicides mixed with Astro 250 EC NZ Growth Regulator may not be optimal for weed control. As formulations of other manufacturer's products are beyond the control of Turf Culture Pty Ltd, all mixtures should be tested prior to use.

**GROWTH REGULATION**

The recommended use rates are designed to give approximately a 50% reduction in clippings over a 4 to 6 week period. In practice the amount of growth regulation achieved will vary between situations due to environmental conditions, management practices 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.

**APPLICATION****Application**

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

**Low 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 (>15cm) 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 NZ Growth Regulator to a known area of turf. The water volume used is not as important providing good coverage is achieved. Apply between 2 L and 10 L of water / 100m<sup>2</sup> of turf. Preferably use flat fan nozzles and ensure even coverage is achieved.

**FIRST AID**

**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE (0800) 764 766 or doctor/physician. If skin irritation occurs: Get medical advice/attention.

**SPILLAGE**

Wear suitable protective clothing including face shield, impervious gloves and boots. Prevent the product or spilled material from entering water bodies. Absorb liquid spills with inert material such as earth or sand and place in waste containers. Wash area with water and absorb with further inert material. Dispose of safely.

**SAFETY DATA SHEET**

If additional hazard or safety information is required, refer to the Safety Data Sheet (SDS), which is available from the supplier or from the manufacturer's website: [www.turfculture.com.au](http://www.turfculture.com.au)

**CONDITIONS OF SALE**

Turf Culture Astro 250 EC NZ Growth Regulator may only be sold to organisations employing a suitably qualified Approved Handler. The use of Turf Culture Astro 250 EC NZ 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.