



Regulate 200SC

Plant Growth Regulator

*Plant Growth Regulator
formulation specific for
turf management*

Product Overview

ProForce Regulate 200SC PGR is a plant growth regulator containing 200g/L of the active ingredient paclobutrazol.

It is registered for the suppression of *Poa annua* (wintergrass) and growth regulation in turfgrass.

Is in the form of a suspension concentrate formulation. The product contains an in-built surfactant, which improves root absorption and plant uptake efficiency of the active ingredient.

Key Features

- > Effective suppression of *Poa annua* (wintergrass) in bentgrass and other cool season grasses.
- > Provides an effective tool to shift the population dynamics in favour of the desirable turf species.
- > Minimises turf surface disruption during the treatment of *Poa annua* (wintergrass). Particularly, when comparing it to herbicidal control options if *Poa annua* concentrations are high (above 30%).
- > Partial seed head suppression of *Poa annua* (wintergrass). Works well in a program with ethephon.
- > Provides growth regulation, reducing clipping production, whilst improving turf density.
- > Liquid formulation, allowing for flexibility in application rate to accommodate changes in climatic conditions.
- > Manufactured and developed in Australia for local conditions.



ProForce Regulate 200SC PGR – Use Rates & Label Recommendations

SITUATION	RATE	COMMENTS
Bent grass, ryegrass, Kentucky, bluegrass, wintergrass, turfgrass	0.5-2 L/ha (5-20 mL/100 square metres)	Apply the 0.5 L/ha rate at 2-4 week intervals or the 1-2 L/ha rate at 4-8 week intervals. Use only the low rate (0.5 L/ha) on wintergrass. Continue normal cultural practices after application.
Bent grass, ryegrass, Kentucky, bluegrass, couch grass (not hybrid couch) turfgrass	2.0-2.8 L/ha (20-28 mL/100 square metres)	Use the lower rate when the percentage of wintergrass in the turf is so high that the resultant yellowing and retardation would be too extensive to be acceptable. Otherwise use the higher rate. Do not apply more than 2 spring or 1 autumn application. Continue normal cultural practices after application.

Mode of Action

The mode of action of paclobutrazol is the inhibition of gibberellic acid synthesis within plants. The inhibition of gibberellin production by paclobutrazol results in slower cell division and elongation without causing direct toxicity to plant cells. As a result, paclobutrazol when used correctly, provides growth regulation, reducing clipping production, whilst improving turf density of desirable grasses.

Paclobutrazol is root absorbed and requires irrigation or rainfall following application to move the material into the turfgrass rootzone. Once in the rootzone, paclobutrazol binds strongly to organic matter in the top few centimetres of soil, where *Poa annua* (wintergrass) roots are most prevalent, due to their shallower rooting nature. When healthy, active root development of cool season grasses such as bentgrass are generally deeper in the rootzone, and as a result, they absorb less paclobutrazol from the soil environment, conveying less sensitivity to the application.

With regular applications during the growing season, the PGR effects of ProForce Regulate 200SC PGR will suppress and reduce the competitive advantage of *Poa annua* (wintergrass), leaving other cool season grasses to grow unaffected. This results in a major shift in the population dynamics of the turf sward, allowing for a transition to desirable grasses to take place.



Maximising performance

- > It will take 1-2 weeks after a ProForce Regulate 200SC PGR application, to see wintergrass growth regulation and a reduction in its competitive function.
- > The degree of discolouration and growth regulation from a ProForce Regulate 200SC PGR application, is rate dependant. It is best to start at low rates (0.5L/ha) and increase incrementally as required (up to 2.0L/ha).
- > Apply ProForce Regulate 200SC PGR to dry or wet turf and water in immediately with 4-6mm of irrigation.
- > Application of ProForce Regulate 200SC PGR 1-2 weeks prior to seed-head emergence will reduce its viability, but not prevent its formation (unlike ethephon).
- > Do not apply when daytime temperatures are consistently above 32°C or when turf is stressed from heat, cold or lack of moisture.
- > Do not apply when soils are waterlogged as fixing onto soil organic matter may not occur and the PGR may move with heavy rainfall or irrigation.
- > Do not apply when turf has thinned from disease or insect infestation or damaged from aeration or scarification.
- > Do not apply to newly overseeded areas until after establishment (6 weeks) and then only use lower rates.
- > Avoid overseeding into ProForce Regulate 200SC PGR treated turf for 14 days.
- > Do not scarify and topdress greens whilst wintergrass is undergoing growth regulation.
- > Cultural practices, climate, soil type, turf variety and *Poa annua* biotype all impact on the level of wintergrass suppression achieved.