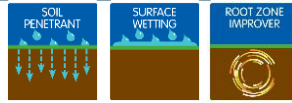




Penetr8-R



Penetr8-R is a premium soil penetrant designed to rapidly assist water through the soil profile, providing:

- Deep soil penetration for applied or standing water.
- Disperses and prevents puddling
- Draws O₂ into the soil profile
- Manages 'hot spots' with Localised Dry Spot (LDS)
- Flushes excess salts in the surface profile

Penetr8-R is a soil penetrating surfactant, designed specifically to move water away from turf surfaces. Its emphasis is in the mobility of water through the profile and as such it is 5 times more effective than standard wetting agents that are designed to hydrate as well infiltrate moisture into the soil.



Where to use Penetr8-R

Penetr8-R can be used on all turf type areas for professional use, including:

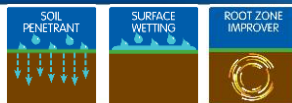
- Golf Courses
 - Greens
 - Tees
 - Bunkers
 - Compacted areas, e.g. walk off areas etc.
 - Fairways
- Bowling Greens
 - Ideal for summer LDS rapid reaction
 - Reducing water retention through cold months
- Tennis courts
 - Maintaining dry surfaces during winter maintenance programmes
- Sports field
 - Maintaining drier / playable surfaces when root zone structures are not in optimal condition
- Cricket
 - Providing dry surface with minimal 'softness' from retained moisture



Penetr8-R can be used all year and is ideal for use through the Autumn to Spring in assisting surface water away from the surface. In the summer will rapidly modify the surface tension of water molecules and allow them to infiltrate into the soil profile, achieving 25 to 30 cm depth within 30 minutes. Penetr8-R also helps to reduce excessive salts near the plant roots.



Penetr8-R



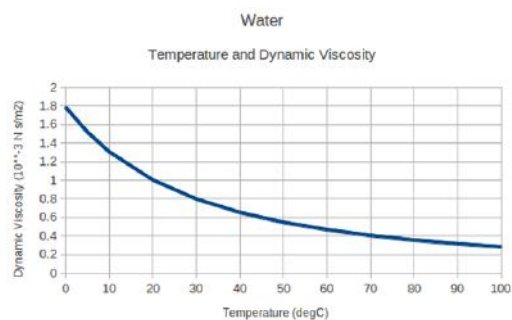
How does Penetr8-R work?

Water has cohesive and adhesive properties, this means it binds together with itself, hence it forms droplets, and it also adheres to surfaces. By reducing the value of these properties allows water to flow and permeate soils more freely. Temperature can have an effect in these characteristics, as water warms up, its viscosity reduces (see table 'Temperature and Dynamic Viscosity').

Nominally a value of 1 is given to water at a temperature of 20°C .

At boiling point the viscosity has reduced to approximately 0.2, i.e.

5 times more slippery. It is not practical to reduce the viscosity of water this way for use on turf, however the surfactant in Penetr8-R is able to convey the same effect and so accelerate standing water away from the surface.



Benefits of using Penetr8-R

- Rapidly reduces the surface tension of water aiding gravitational forces to move water down through the soil profile
- Decreases viscosity – significantly improving water penetration into soils when cold temperatures tend to work against this mechanism
- Reduces environmental habitation at soil surface for pathogenic fungal mobility.
- Decreases stress effects from frozen soils
- Provides rapid (5 minutes) initial wetting of dry, water repellent soils
- Moves excess water from the soil surface and through the soil profile
- Increases the flow of oxygen into and through the soil profile
- Ideal for areas prone to drought, e.g. bunker tops and 'hot spots'
- Assists flushing through excessive salt concentrations
- Reduces water 'puddling' form low lying hollows



Available in 1lt and 10ltr containers

Application rate 5 – 10 litres per ha in 700lts of water

Repeat as necessary (usually 4-6 weeks)

Contains: Dioctyl sulphosuccinate surfactants

