

Rainsaver

Water Storing Crystals

What is it?

RainSaver is the first environmentally safe water crystal developed specifically to work in the root zone of plants where it creates the optimum conditions for plant growth and survival in all areas of application.

It is a mix of cross-linked acrylic acid and acrylamide co-polymers, neutralised with potassium hydroxide and ammonia which are essential nutrients for plants. The cross-linking agents create a three dimensional network that makes RainSaver insoluble in water. Acrylamide improves the long term stability of RainSaver whilst the combination of acrylic acid and potassium acrylate generates the high swelling capacity. Uptake of water is facilitated mainly by the negative carboxylic groups of the polymer and their hydration with water molecules. As water binds to the molecule chains the polymer network expands. The addition of ammonia leads to an environmentally safe product free of harmful residues.

Where can it be used?

Suitable for forestry, turf, revegetation, landscaping, in-ground horticultural crops, bulk potting mixes, established containerised plants and garden beds.

How to get the best results

For best results the application should be made around the root zone of plants.

How does it work?

RainSaver resembles sugar crystals when dry. Introduce water and the crystals swell dramatically. Converting to gel like sponges, absorbing and storing water and water soluble plant nutrients.

After heavy rain or full irrigation micro pores in the soil are filled completely with water. The micro pores store capillary water, which is easily available for plants. Plants take this water up. With the increased water uptake the water potential decreases. Nearby water flows by capillarity towards the roots to equalise the potential. The root hairs can continue to draw on the water around them until the water film becomes too thin. The plant then starts to wilt. The amount of water stored in the micro pores of the soil is called field capacity. At field capacity the macro pores of the soil are drained by gravity, with excess water draining through the soil profile.

RainSaver is fully integrated into this "natural system" of water withdrawal by plants. Storing water and dissolved plant nutrients in the area of the macropores against gravity where it is easily available for plants on demand, via their roots. 95% of the absorbed water is available back to plants.

RainSaver is not able to withdraw water from plants so there is no competition with regard to available moisture. Water and nutrient elements are taken up directly by the fine root hairs growing into RainSaver or they are slowly released to the surrounding soil by osmotic processes. This uniform moisture supply leads to fast and intensive root growth, and increased survival rates of new plantings.

Due to the expansion of RainSaver during water uptake the soil volume changes, resulting in reduced soil compaction, improved soil porosity and permeability. Thus, by loosening the soil root growth is enhanced.

Increasing the water holding capacity of soils and potting mixes RainSaver provides a continuously available water reservoir, just where it's needed—in the root zone. Due to the improved moisture supply to the plants the yield potential of soils and potting mixes is ensured.

Active constituents



Pack sizes available

Directions for use

Situation	Rate
Potting Mix: bark-based	750 grams per cubic metre
Potting Mix: peat-based	650 grams per cubic metre
Hanging Baskets	5 grams per 5L of potting mix
Pots and Containers	5 grams per 5L of potting mix
Garden Beds	25 grams per square metre — mix thoroughly into soil
Turf (applied in rolls)	10–20 grams per square metre — spread evenly over prepared ground before laying turf
Lawns (grown from seed)	10–20 grams per square metre — mixed to a depth of 50–75mm in prepared ground
Seedlings	10–20 grams per square metre — mixed to a depth of 50–75mm in prepared ground
Trees and shrubs — planting out	
Up to 140mm pot	3 grams mixed in with planting hole soil
140mm up to 200mm	5 grams mixed in with planting hole soil
300mm	10 grams mixed in with planting hole soil
Litre Bags	1 gram per litre of potting mix
Soil types — soil blending	
Sand	500 grams per cubic metre
Sandy Loam	350 grams per cubic metre
Clay	250 grams per cubic metre

