



HIGH PERFORMANCE WATER RETAINER

SAP

SUPER ABSORBENT POLYMER

GROSAFE SAP is a high performance super absorbent polymer based water retainer scientifically formulated using an innovative cross-linked co-polymer of potassium polyacrylate. GROSAFE SAP super absorbent polymer has a range of applications but is primarily used as a highly effective water retainer for soils and substrates in agriculture and horticulture. It is nontoxic and safe to the environment.

When incorporated into soil or a substrate SAP will absorb and retain large quantities of water and nutrients. Unlike most products that become hydrated, SAP can dry and rehydrate over a period of 2-3 years, constantly retaining and releasing water up to 150 times its own weight (30g of SAP can retain and release 4.5 litres of water).

At the recommended soil incorporation or under sowing rate of 150 kg/ha SAP will absorb and release 150 litres of water per kg of SAP or 22,500 litres (22,500,000 mls) of water/ha. This process occurs after every rain or irrigation event when the SAP recharges and slowly releases moisture and nutrients over its 2 -3 year life in the soil.

DIRECTIONS FOR USE

1. Planting

When planting young trees add 30g sprinkled evenly over backfilling soil. Backfill ensuring even SAP distribution from the base of the hole to just below the surface.

2. Soil Incorporation

SAP can be broadcast at the rate of 100 – 150 kg/ha on ground prepared for seeding or transplanting of vegetables and arable crops. Following broadcasting SAP should be incorporated through the soil profile to the estimated root depth of the crop to be sown or planted.

SAP is also recommended for use when establishing lawns and pasture by incorporating in the seed bed prior to sowing. This ensures effective germination, faster root development and regular, even growth of lawns and pasture.

3. Mixing With Fertiliser

SAP can be added to the fertiliser in the fertiliser hopper and soil incorporated at the time of planting pasture, arable broad hectare or row crops at an effective rate of 100 – 150 kg/ha.

4. Undersowing

SAP can be undersown into existing pasture or sward of any horticultural crop (vineyards, orchards) using a calibrated undersowing drill. SAP should be undersown to a depth of 100 – 150 mm in late winter/early spring when soil conditions are moist and drill coulter penetration is enhanced. The rate for undersowing is 100 – 150 kg/ha.

Minimising Leaching Of Nutrients

When fertiliser and other nutrients are applied to the soil surface they are moved through the soil profile and solubilised by moisture. Leaching of nutrients beyond the root zone of the target crop or plant can occur during rain or irrigation events. By incorporating SAP in the soil the moisture containing the nutrient solution is absorbed by the SAP and released during the drying phase, greatly reducing leaching and enhancing the utilisation of the fertiliser that is applied. This process is repeated continually over the life of SAP with the wetting/absorption phase and the drying/release phase.

USE RATES

USE SITUATION	USE RATE	COMMENTS
PLANTING	20 - 30g/ planting hole	Sprinkle SAP over backfilling soil. Backfill ensuring even SAP distribution from the base of planting hole to just below the surface.
SOIL INCORPORATION	100 - 150kg/ha	SAP can be broadcast at the rate of 100 – 150 kg/ha on ground prepared for seeding or transplanting of vegetables and arable crops. Following broadcasting SAP should be incorporated through the soil profile to the estimated root depth of the crop to be sown or planted.
LAWNS & PASTURE	100 - 150kg/ha 10 - 15g/m ²	SAP is recommended for use when establishing lawns and pasture by incorporating in the seed bed prior to sowing. This ensures effective germination, faster root development and regular, even growth of lawns and pasture.
MIXING WITH FERTILISER	100 - 150kg/ha	SAP can be premixed with fertiliser and added to the fertiliser hopper and soil incorporated at the time of planting pasture, arable broad hectare or row crops at an effective rate of 100 – 150 kg/ha. When incorporated with fertiliser soil moisture is retained and nutrient leaching reduced. Plants fertilised with this mix demonstrate improved yields, at the same time protecting the environment from nutrient leaching. Fertiliser savings of 15% - 30% can be achieved.
UNDERSOWING	100 - 150kg/ha	SAP can be undersown into existing pasture or sward of any horticultural crop (vineyards, orchards) using a calibrated undersowing drill. SAP should be undersown to a depth of 100 – 150 mm in late winter/early spring when soil conditions are moist and drill coulter penetration is enhanced. The rate for undersowing is 100 – 150 kg/ha.
HYDROSEEDING	20 - 30g/m ²	SAP can be used in hydroseeding to stabilise newly graded soils. Mixed with or without cellulose mulch, it makes it possible to maintain a minimum of surface water permitting rapid germination of seedlings, even in dry areas. The vegetation cover develops rapidly and uniformly over the whole treated surface. There are no dry spots without grass.
SOIL MIXES	150g/m ³	When mixed with a substrate SAP acts as a super absorbent water retainer providing a reduction in water stress. It ensures that plant cuttings and transplants take root better and that seedlings grow faster. Irrigation frequencies can be reduced by 30% - 50%, saving time and water. SAP is an ideal addition to substrates for containers, hanging baskets and house plants.

