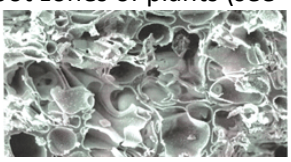
General Information

GeoPlant aquasafe fine granules contain numerous micro-particles of hydrogel-composites for storing water and fertilizers in the root areas of plants. The fine granules look similar to soil and smell like soil.

A dose of 10-20 ml (≈ 5-10 g) per liter of soil is usually sufficiently effective for reducing watering amounts/intervals by up to some 50%. The upper dosage range refers, e.g., to very sandy soil.

In the main, the product contains super absorber polymers (primary water-storing component), lava rock flour and perlites. The patented manufacturing "trick" is: Take these raw materials for agglomeration into a composite, which still has very small particles of SAP, coated by a highly porous and sharp-edged mineral matrix, sharp-edged for well sticking to earth crumbs and better remaining in the root zones of plants (see microscopic picture at the right).



This coating of SAP particles prevents their typical gelling and clumping together, an unwanted situation in the root zones of plants. On the other hand, this coating of SAP particles allows operating with particles as small as possible.

The overall lager surface of smaller particles increases the water-storing capacity of the composite. This results in a competitive lower price of the final composite compared to the use of pure SAP: with only some 20% of SAP in the composite, insofar as SAP manufacturing remains a complex technical procedure, leading to a much higher price per unit of weight in comparison of usual prices for the other raw materials in the composite.

Nonetheless, these other raw materials are widely used for ecological agriculture and other plant growing with respect to better soil aeration, looser soil and natural non-synthesized mineral nutrients for a vigorous growth of plants.

Moreover, the nature of SAP particles is swelling in contact with moisture/water. The smaller such particles, the lesser they could damage fine roots in the root zone.

GeoPlant aquasafe remains (desreasingly) effective for up to 5 years and is at least semi-biodegradable in the soil (cutting edge of research 2021). The duration of action can be prolonged with lower maintenance doses (see below for "vaccination" of existing plants using suspension).

Planting larger shrubs, bushes and trees in holes

Mix excavated soil or the intended planting substrate with GeoPlant aquasafe and fill the hole around the plant. Finish filling the planting hole with a thin layer of soil without having mixed in any hydrogel composite.

For lager woods or trees, mix double the dosage of GeoPlant aquasafe as specified above (i.e. 20-40 ml per liter of excaved soil or special plant substrate) and put that mixture at the bottom of the planting hole and as close to the root bale as possible. Further rooting will then distribute the composite particles in the increasingly larger root zone. At the time of planting, composite particles, still far away from the former smaller root zone, could not supply water even upon principally sufficient osmotic pressure for dry roots to get some water from their soil environment.

At the end, the foreseeably final dosage in the further growing root zone (see above) will be lastly the same as principally recommended (for comparably smaller overall final root zones of other plants.

For already existing plants, which have had to be needed to be watered according to experience so far rather much more/frequently than previously expected, you could make a **suspension** of GeoPlant aquasafe fine granules.

- Easily solve some 20-40 ml/≈10-20 g per liter of water (takes a few minutes, only)

- Fill the solution into carefully/professionally reflected drilled holes into the root zones of the respective existing plants
- Please fill the top of such drilled holes with some excavated soil from drilling.

(**Agricultural applications:** *For maintanance dosing, use a lime spreader prior to seasonally ploughing the field or a seed driller for doing it in one batch.*)

Planting beds of flowers, shrubs and vegetables

Per square meter (sqm), distribute approx. 300-500 ml (150-250 g) evenly at the soil surface.

Then rake it into the soil to a depth of some 15-20 cm. Finish this pre-planting procedure with watering.

Graves

Apply the same procedure as described for flowers, shrubs etc.

Flower pots or containers, balcony boxes and hanging baskets

Mix 10-20 ml (≈ 5-10 g) of GeoPlant aquasafe per liter of whatever planting substrate and fill in this mixture, but not the very top around the root bale. Then cover all with soil/substrate without GeoPlant.

Seeding grass Seeding grass or cultivating rolled lawn

Rake into the soil evenly some 150 mg per sqm at a depth of approx. 5 cm and water the ground evenly as well as well as “softly”, preferably using a lawn sprinkler (prior to rolling the ground for seeding or rolling out lawn).

Enjoy your outdoor and also any indoor growing results with GeoPlant aquasafe!

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