



Technical Manual

The product Zeoplant is a very effective water retaining soil amendment, consisting of fully natural mineral materials, treated with a special natural organic component.

Its unique features are a very big active surface, high porosity, extremely good water holding capacity (WHC) and high Cationic Exchange Capacity (CEC).

Zeoplant reduces the infiltration speed of the sweet soil by up to 85%!

With the usage of Zeoplant, peat moss is no longer needed in the soil mix for soil moisture retention.

The compost in the soil mix can easily be reduced by 50% when using Zeoplant.

Zeoplant contains lots of nutrients and has a high CEC (cationic exchange capacity) and helps the healthy growth of the plants.

Components of Zeoplant

ZEOPLANT is a mixture of many different mineral components of which some can only be found in the producer's mines.

Additionally, one component is a natural organic material which can be found in any good quality soils.

1. Component: tecto silicates and devitrified volcanic glass (rhyolitic tuff/tuffit, kali tuff/tuffit, clinoptilolite, christoballite, pyrolusite, etc.)
2. Component: natural phyllo silicate (illite, montmorillonite)
3. Component: natural organic component, which is also used as a food additive.

The mineral components of ZEOPLANT increase the water retention capability of the soil significantly. The special natural organic additive forms an active matrix between the soil particles and the mineral components of Zeoplant.

By this effect, the depth of infiltration of the irrigation water will be reduced, and it will be kept in the useful layer of the soil - in the root zone.

The mineral components of ZEOPLANT support the formation of new and fine root fibres very much by contacting the active surface of the mineral grains with the roots or seeds. ZEOPLANT has "positive irritating effect" on the covering cell-membrane of the root that causes the formation of many new fine roots. Those support the general health condition of the plant, while they can collect more nutrients and moisture from the soil.

If there is insufficiency of humic salts, ZEOPLANT takes over the role of those, by having similar high ion exchange capacity. The ZEOPLANT grains are charged with a wide scale of nutritive cat ions, which presence was resulted by volcanic genesis of these minerals.

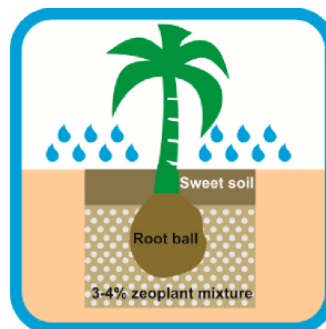
The inorganic components of ZEOPLANT are in calcium-potassium loaded cationic form. During the irrigation process the calcium, potassium, different trace elements and other cat ions are released from the mineral in the soil liquid.



Installation of Zeoplant for new plantations:

Palm Trees & Trees

Mix Zeoplant with sweet soil taken out of the tree pit at ratio 3-4% by volume. Fill the mix back to the pit at 15 – 30 cm layer; then place the root-ball on this layer and fill the rest of the Zeoplant-sweet soil mix around the root-ball until root-ball is fully covered. Fill the upper pit with normal sweet soil.

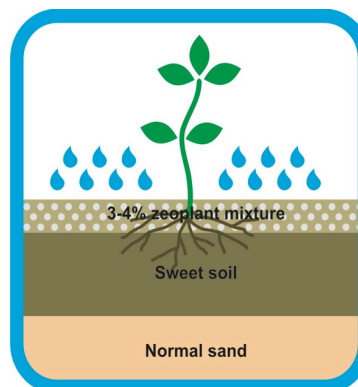


Shrubs & Ground cover

Mix Zeoplant with sweet soil and fill around the roots of the plants similarly to the application for trees. For planting beds just mix Zeoplant at 3 – 4 kg/m² in the sweet soil at a depth of 15 – 30 cm.

Lawns

Apply 3 kg/m² on the sweet soil and rake in or mix in by rotavator at a depth of 8–10 cm. After levelling of the Zeoplant-sweet soil mix, grass can be planted by stolons or turf.



Zeoplant's density is 1:1 – 1 m³ = 1,000 kg

Physical & chemical characteristics of Zeoplant

pH	:	6.7 – 7.1
Content of potassium	:	3 %
Soluble potassium content	:	0.7 %
Content of nitrogen	:	800 mg/kg
Content of phosphorous	:	400 mg/kg
Ca & Mg	:	160 meq/kg

Guaranteed savings by using Zeoplant:

- Minimum 50% irrigation water
- Minimum 50% on NPK fertilizers
- Pumping, storage, electricity & maintenance cost for irrigation