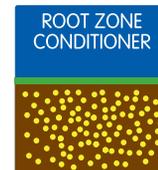
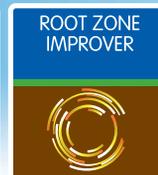
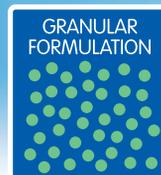


Profile Greens

porous ceramic soil conditioner



A porous ceramic soil amendment for high performance root zones

WHY Profile Greens

- Improves root zones by adding water, nutrient and air holding capacity to the soil structure
- Excellent stability – still stable after 30 years
- High, permanent Cation Exchange Capacity (CEC)
- Consistent USGA particle size distribution – 99% between 0.15-1.0 mm
- Proven by university studies to hold water like peat but drains like sand

Profile Greens is a true porous ceramic product engineered to solve and prevent soil problems. The accurate computer-controlled firing process permanently changes the base minerals (Illite Clay and Amorphous Silica) into a stable porous ceramic particle. It is no longer a clay, with no danger of particles breaking down into clay resulting in layering problems, unlike some products which are not fired to the same temperatures.

Profile Greens particle size distribution has been specifically tailored to match USGA particle size recommendations.

How Profile Greens grade works

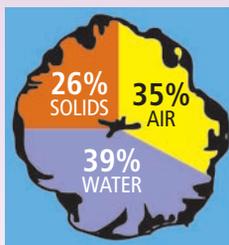
Profile Greens physically improves the soil structure. In sand it increases water retention and nutrient-holding because of the capillary pores and the Cation Exchange Capacity (CEC). Percolation rates are increased when it is mixed with sand because of the non-capillary pore space within the product. Soil-based greens benefit by the added porosity **Profile Greens** provides for better drainage.

Profile Greens is very stable: Stability over time is obviously important, especially during winter or freeze/thaw cycles.

Profile Greens is four times as stable as USGA requirements and has been shown not to break down. Stable particles have been found in Purdue University greens 30 years after incorporation.



The Profile Greens particle



Each particle is 74% pore space with approximately 39% capillary (water) pores and 35% non-capillary (air) pores. **Profile Greens** blended with sand or soil increases the water and nutrient holding pores as well as increasing the air and drainage pores.

Profile's CEC will assist in the retention of nutrients, but unlike organic materials, such as peat, will not cause layering and will increase percolation rates.

Product



Detail

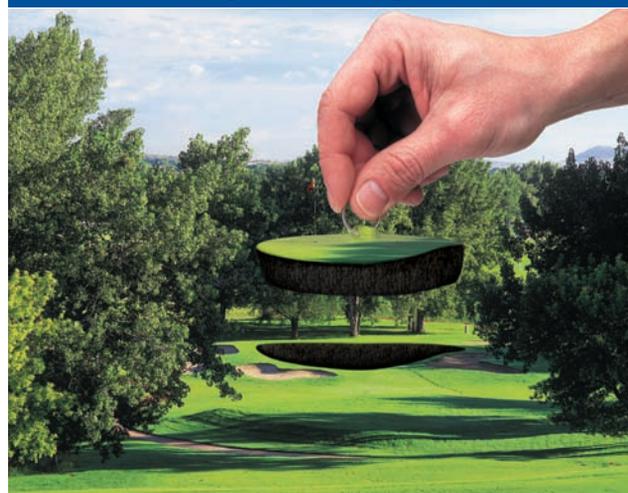
Profile Greens

Pack size: 22.68 kg
Pack coverage: Variable
RT order code: 0212302/

Profile Field & Fairway

Pack size: 22.68 kg
Pack coverage: Variable
RT order code: 0212306/

Pull the plug on drainage problems!



Profile Greens has a high CEC: A permanent CEC of 33 meq/100g is provided by **Profile Greens**. It has a strong affinity for Potassium, which can leach quite readily from sand-based rootzones. **Profile Greens** has a low affinity for Sodium and in high salt areas it can therefore help amend the root zone by increasing drainage, allowing the flushing of greens of Sodium.

Profile Greens holds water like peat, but drains like sand: Ohio State University proved **Profile Greens**' 50/50 balance of capillary and non-capillary pore space will retain water and also let water drain. Water is held within, and drawn through, the capillary pore space of the porous ceramic particles. The non-capillary pore space lets water flow through the soil if it becomes saturated. Adding **Profile Greens** to sands will increase percolation rates and improve water availability.

Profile Greens reduces surface algal problems: Surface algal problems can be reduced dramatically by frequent light top dressings of **Profile Greens**. The excellent absorptive characteristics enable it to retain the moisture which is necessary for surface algal growth.



How Profile Field & Fairway works

Profile Field & Fairway is ideal for any soil since its unique structure contains thousands of pore spaces, and when mixed into the soil modifies its structure. It creates air spaces, increases the percolation rate, has excellent capillary characteristics and prevents clay soils from bonding together to cause compaction.

The slightly larger particle size provides 78% porosity of which 41% is capillary pore space and 37% is non-capillary pore space.

Profile Field & Fairway is ideal for use in most amenity areas e.g. sportsgrounds, whilst **Profile Greens** should be used for high performance root zones e.g. golf greens, bowling greens.



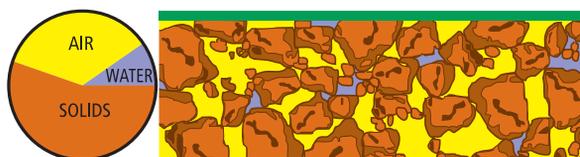
THE IDEAL SOIL

Ideal soil should contain 50% solid and 50% pore space. (½ capillary or water holding pore space and ½ non-capillary or air-holding and drainage pore space)



COMPACTED SOIL

Compacted soil reduces or eliminates the non capillary (air-holding and drainage) pore space



SAND SOIL

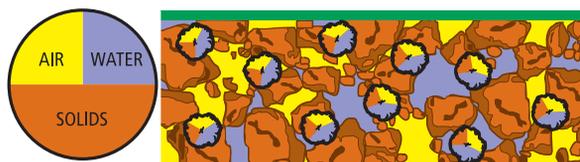
Sand soils resist compaction, but they have little water or nutrient retention ability.



SAND/PEAT MIX

(Percolation rate: 12-15" per hour).

Peat has been added to sand soils to increase water and nutrient retention. The problem is that peat or other organic materials tend to reduce water percolation rates and are relatively short-lived.



SAND/PROFILE GREENS MIX

(Percolation rate: 20-24" per hour) Profile brings sand back to the ideal soil conditions by balancing pore space. It improves percolation rates, water retention and nutrient retention.

RECOMMENDED PERIOD OF USE

