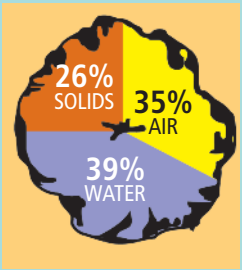
MASCOT SPECIALITIES

POROUS CERAMIC SOIL CONDITIONER

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

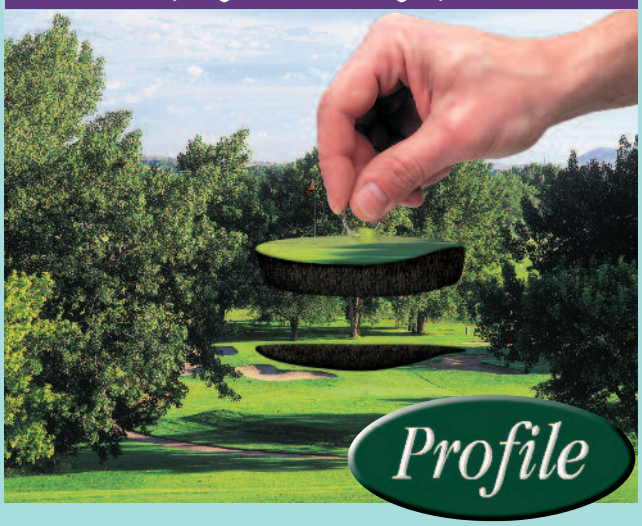
THE PROFILE GREENS PARTICLE



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.

Pull the plug on drainage problems!



Compacted soils have a reduced Oxygen content whilst also restricting the availability of water and nutrients, all of which lead to poor drainage and weak roots. **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 causing layering problems. Stable particles have been found in Purdue University greens 30 years after incorporation.

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 ***significantly improves top dressing mixtures:***

- When compacted rootzones are hollow-tined and sand-dressed, non-capillary (air) pore space is increased in the aeration holes only.
- When poorly drained rootzones are core aerated and top dressed with a **Profile Greens**/sand mixture, moisture is absorbed or wicked from surrounding areas into the **Profile Greens** within the aeration holes, leaving air pockets in the surrounding soil for healthy root development.
- In droughty rootzones, **Profile Greens**/sand mixtures retain moisture in the aeration holes, providing reserves for healthy root growth.

Repeated aeration with **Profile Greens**/sand mixtures will influence more and more of the rootzone over time.

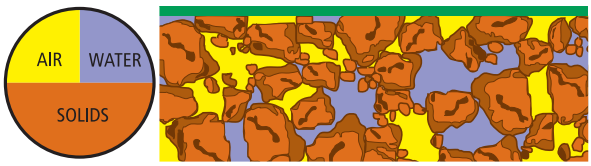
HOW TO USE PROFILE GREENS

Use **Profile Greens** on golf greens, bowling greens and other fine turf areas.

For the improvement of poorly draining/anaerobic rootzones:
Deep tine or aerify conventionally as appropriate.

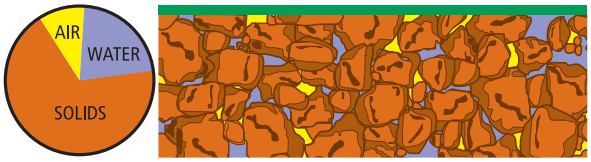
- Deep Tine: Ideally make one application of 100% **Profile Greens** at 136kg/100 m^2.

APPLICATION RATE NOTE				
22.7	kg/100m^2	=	2	bags/100m^2
28.4	kg/100m^2	=	1¼	bags/100m^2
56.7	kg/100m^2	=	2½	bags/100m^2
68.0	kg/100m^2	=	3	bags/100m^2
136.0	kg/100m^2	=	6	bags/100m^2



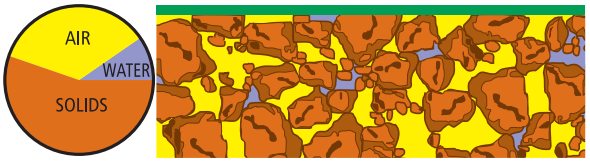
THE IDEAL SOIL

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)



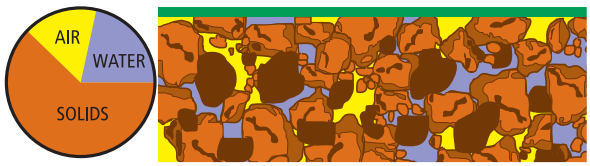
COMPACTED SOIL

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



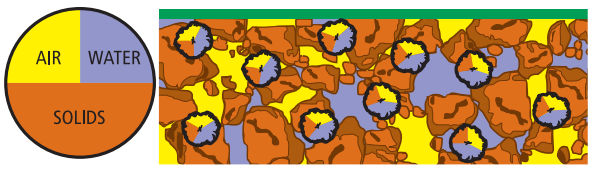
SAND SOIL

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.

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

Use plant protection products safely. Always read the label and product information before use.

* Conventional Aerification: Apply 100% **Profile Greens** at 136kg/100m^2, or 50% Sand + 50% **Profile Greens** at 68kg/100m^2. Two applications required.

Alternatively, for each of the above make multiple applications over a period of time to achieve the final amount.

For Localised Dry Spot: **Profile Greens** adds capillary pore space in the dry area to attract and hold moisture from lower areas.

* Aerate and apply 100% Profile Greens at 56.7kg/100m^2 or 50% sand + 50% Profile Greens at 28.4kg/100m^2 with two applications needed.
* After brushing in, thoroughly water to reach field capacity.
* Do not top dress in temperatures above 85°F (29°C)

For Improved Nutrient Retention: **Profile Greens'** high CEC enables it to hold onto Potassium (K), Iron (Fe), Magnesium (Mg) and Calcium (Ca).

* Hollow-core aerate to depth
* Mix 50% **Profile Greens** with top dressing sand and incorporate into aeration holes
* As the green improves gradually reduce the percentage of **Profile Greens** in the blend (never use less than 10% by volume).

For Reduction of 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.

* Apply Profile Greens at 22.7kg/100m^2
* Apply every 10-14 days until problem is cured.

For Construction/Rebuilds: **Profile Greens** creates a water, nutrient, Oxygen and microbe friendly reservoir in the rootzone. The particle size distribution has been specifically tailored to match USGA recommendations. **Profile Greens'** degradation over a simulated 30 year time span (as required under test conditions) is a mere 2.8%. The USGA requires a degradation under this test parameter of less than 12.5%.

* Obtain a physical analysis of the sand or soil being considered in construction. Ensure results include saturated hydraulic conductivity, pore space balances, bulk density, water retention, pH, and particle size analysis
* Finer sands require less **Profile Greens** and coarse sands more.
  10% Profile Greens = 136 kg/100m^2 per 1inch depth (6 bags)
  15% Profile Greens = 215 kg/100m^2 per 1inch depth (9½ bags)
  20% Profile Greens = 283 kg/100m^2 per 1inch depth (12½ bags)

Profile Field & Fairway

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.

HOW TO APPLY PROFILE FIELD & FAIRWAY

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

For the improvement of poorly draining/anaerobic rootzones:

* Aerate intensively by hollow tining to depth
* Apply at 117kg/100sq. m (5 bags /100 sq.m)
* Work thoroughly into aeration holes leaving 1/8 top dressing over surface.

For Improved Nutrient Retention:

* Hollow core aerate to depth
* Mix 15% by volume **Profile Field & Fairway** with top dressing sand and incorporate into aeration holes.

For Construction/Rebuilds:

* Obtain a physical analysis of the sand or soil being used in construction
* Apply **Profile Field & Fairway** at a rate of 15% by volume.