Profilegolf™

Profile™ Porous Ceramic

Arnold Palmer's Bay Hill Club & Lodge, 8th Hole

Your Key to a Healthier Root Zone

Profilegolf™

Profile™ Porous Ceramic
The Best Way To Amend Your Sand

PPC for Sand Root Zones

Profile™ Porous Ceramic (PPC) is an inorganic soil amendment that replaces peat and dramatically improves the moisture and nutrient holding ability of sand root zones. PPC mixes meet the specifications outlined in the USGA's *2004 Recommendations for a Method of Putting Green Construction* and is used on over 3,500 courses around the world. Unlike peat, PPC improves the drainage of sand root zones—and it does so permanently. PPC, added to your sand or soil, does not breakdown or decompose. It also increases drainage at the same time it increases moisture retention, a result of balancing air and water pore space in the root zone.

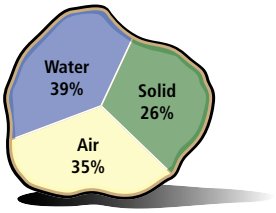
PPC has been proven on thousands of greens and at major turfgrass universities across the country to increase soil oxygen, resist compaction, eliminate localized dry spot, drain better and facilitate healthy root systems that leave turf less prone to disease. As part of a new greens mix or used in your topdressing program, PPC has proven to be more effective than peat or other inorganic amendments at increasing air and water pore space and enhancing nutrient uptake without breaking down.

ED SEAY
EXECUTIVE VICE PRESIDENT
PALMER COURSE DESIGN COMPANY

"We have seen nothing but positive results and feedback from our courses and clients that are using Profile Golf. It is with great pleasure and assurance that Palmer Course Design Company recommends Profile for your golf course."

How PPC is Made

PPC is made of a kiln-fired ceramic that is mined and produced in Mississippi. Profile Products LLC owns the mining and manufacturing facilities that produce this unique soil amendment.



A Profile particle is 74% pore space with approximately 39% capillary (water) pores and 35% non-capillary (air) pores. Blended with sand or soil, Profile increases the water and nutrient holding pores as well as increasing the air and drainage pores—permanently improving most soils.

Over the life of golf greens constructed with Profile™ Porous Ceramic, there are substantial savings reported by superintendents, including:

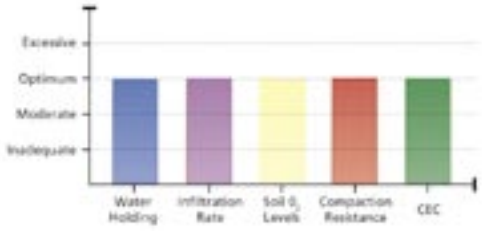
- Accelerated grow-in
- Reduced water usage (up to 20%)
- Reduced fertilizer usage (up to 25%)
- Reduced core aerification (up to 50%)
- Reduced chemical treatments for disease & algae

The Hidden Foundation to Healthy Turf

MIKE POCK
SUPERINTENDENT
WHISPER ROCK GOLF CLUB
SCOTTSDALE, AZ

To solve turf problems on your course, it's important to understand how soil itself can impact the issue. Here are the causes of common soil problems and the solution through ideal soil composition.

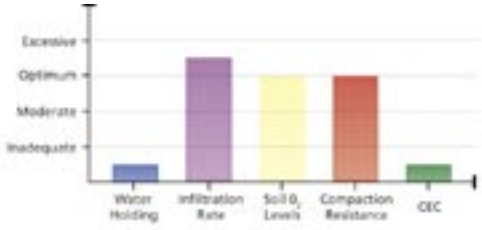
> "Profile holds water and holds air—those two things make growing bentgrass very easy in the Arizona desert."

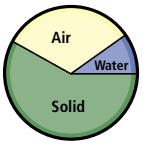


POROSITY

IDEAL SOIL

Ideal soil contains 50% solid and 50% pore space. The 50% pore space should be 1/2 capillary (water holding) and 1/2 non-capillary (air holding and drainage).

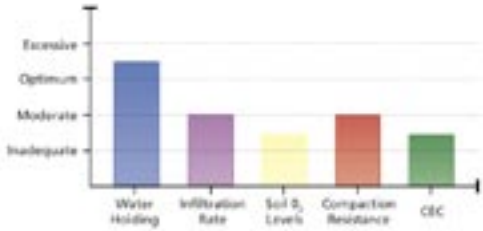




POROSITY

SAND-BASED

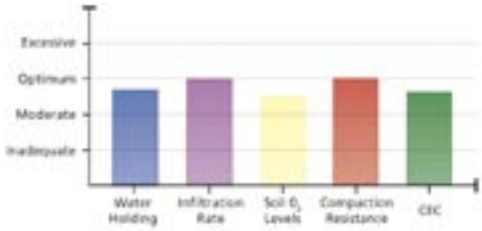
Sand root zones resist compaction, but have little water and nutrient holding ability.



POROSITY

SAND/PEAT MIX

Peat is added to sand-based root zones to improve water and nutrient holding. However, peat slows drainage, changes over time and decreases the air space in the soil.



POROSITY

PROFILE PPC MIX

Profile PPC brings sand back to ideal soil conditions by balancing pore space and providing excellent air space. It also increases moisture and nutrient retention.

Sand-sized for sand-based root zones

Profile™ allows you to improve sand root zones by adding pore space, moisture retention and nutrient holding capacity while increasing soil oxygen and drainage. Profile's particle sizing falls within the medium to coarse particle range of the USGA® guidelines, which is .25 mm to 1 mm. The Profile Golf staff can meet with you to discuss your needs and particular situation, develop the best root zone mix recommendations and then help obtain the mix ingriedients–all at no extra charge. To test your sand and analyze the results, contact your local Profile Golf distributor today.

PPC Application Examples: Making Good Courses

FARM LINKS

The Farm Links Golf Club in Sylacauga, Alabama, was established to be a showcase of turf maintenance practices and a valuable resource for ongoing superintendent education. Tim Lacy, original director of golf and grounds maintenance, selected Profile to help meet the challenge of seeding the course's bentgrass greens in the Deep South during June and July. He was impressed with samples taken during the grow-in stage that showed air and water pore space were ideally balanced, and that the root zone mix was as consistent and uniform as the day it was added to the greens during construction. Said Lacy, "We had the easiest grow-in of bentgrass than any place that I've ever seen. I would never build another course without using Profile."

> "We had the easiest grow-in of bentgrass than any place that I've ever seen. I would never build another course without using Profile."
>
> **TIM LACY**
> FORMER DIRECTOR OF GOLF & MAINTENANCE
> FARM LINKS GOLF CLUB
> SYLACAUGA, AL

BAY HILL

Based on its success with Profile on its Charger Course (see chart below), the Bay Hill Club in Orlando, Florida, removed the organic material in the root zone mix of its Championship course, home to the PGA Tour's Bay Hill Invitational. In its place, Palmer Course Design recommended a mix of 80% sand and 20% Profile. "The Championship greens are performing very well," said John Anderson, Bay Hill's superintendent. "Profile keeps the greens draining, which means more air in the root zone—where it's most needed. Profile also helps us with retaining water and nutrients. We now have healthy greens that will hold up to the low mowing heights and traffic associated with a professional tour event."

Comparison of 8-year-old Profile-amended greens vs. 6-year-old greens amended with organic material

A comparison of soil analyses between 8-year-old Profile-amended greens at Bay Hill's Charger Course[1] and 6-year-old peat-amended greens at the Cordillera Mountain Course near Vail, Co.,[2] illustrates that even after 8 years Profile outperforms peat in drainage and air pore space.

Root Zone Mix	Drainage (in/hr)		Porosity (%)			
			Non-capillary (Air-holding/drainage)		Capillary (Water-holding)	
Sand/Profile (8 year-old at Bay Hill's Charger Course)	Original 28.1	8 years 9.1	Original 25.5	8 years 24.8	Original 12.3	8 years 20.8
Sand/Peat amendment after 6 years (At Cordillera Mountain Course)	Original 23.8	8 years 3.1	Original 22.1	8 years 13.9	Original 20.7	8 years 32.7
USGA Recommendations						
Normal range:	6-12		15-30		15-25	
Accelerated range	12-24					

[1] Tifton Physical Soil Testing Laboratory, Inc., March 7, 2002.

[2] Jason Habeck and Nick Christians, Ph.D; "Time alters greens key characteristics," Research section, *Golf Course Management*; May 2000.

Profile™
Your Trusted Partner In Soil Solutions

PROFILE Products LLC
750 Lake Cook Rd., Suite 440 • Buffalo Grove, IL 60089 • **1-800-508-8681**
www.profileproducts.com