



TURFACE®

Porous Ceramic
Soil Conditioners

AT THE ROOT OF
BEAUTIFUL LANDSCAPES.

Our Customers *and Results* Speak for Themselves.

More people every day rely on Turface® Porous Ceramic Soil Conditioners to enhance the soil structure of their landscaping. These all-natural conditioners permanently improve the root zone by adding air- and water-holding capacity in all types of soil. The result is better drainage when it's wet, better water-holding capacity when it's dry, deeper root growth, healthier plants and happier customers.

"IN OUR GREENHOUSES, we incorporate Turface into soil mixes to improve soil structure for plants that are going to be in containers for a long time. The incorporation also reduces or eliminates yellowing due to iron deficiencies in grasses and certain flowering plants like petunia and calibrachoa. It has eliminated the need for us to incorporate top soil, which requires labor-intensive digging, drying, grinding, and pasteurizing. I have recommended Turface calcined clay to my grower colleagues at other universities, institutions and agricultural companies."

*Rob Eddy — Plant Growth Facilities Manager
Purdue University*

"FOR OVER TEN YEARS I have personally seen the positive effects Turface products have when used as soil amendments: increased resistance to compaction, consistent moisture-holding capability, and improved root-zone porosity. During that time, I also tried competitive amendments. Only Turface products have consistently performed as advertised, did not break down over time, and achieved the results I promised to the owner."

Don Campbell — Landscape Architect



Do it Right Once and You're Done.

Peat moss is probably what most people think of to “fix” or improve their soil. “Add peat to sandy soil to improve its water- and nutrient-holding ability. Add peat to clay to loosen it up and improve its drainage.”

It's true. Peat, as well as other “quick fix” options like compost and topsoil do work, but only for a short time. The problem is that like any organic material, these options decompose, and as they break down, they quit working. It can actually make poor drainage an even bigger problem in any kind of soil.

Turface®, on the other hand, is a ceramic particle that doesn't decompose or break down over time. The balanced structure and pore space it creates in any soil is permanent.

So the same great qualities it provides your soil the day it's incorporated will remain for the life of that landscape bed. The long and the short of it is, “Do it right once and you're done.”

Begin with Better Soil.

Give landscape beds long-lasting beauty with Turface® Porous Ceramic Soil Conditioners. Whether it's in containers, hanging baskets, rooftop gardens, planting beds, vegetable gardens, backfill around trees or shrubs, for lawn maintenance or aerification, Turface improves any growing media, creating ideal soil conditions that lead to:

- Larger plants
- More flowers
- Larger blooms
- Reduced plant stress

And because Turface lasts year after year, you don't have to keep reapplying it as you do with peat and other organic substitutes.



100% Potting Soil



*50/50 Potting Soil and Turface®
Porous Ceramic Soil Conditioner*

Why is Soil Structure so Important?

Soil plays a huge role in the success or failure of your design efforts. Unfortunately, most of the soil around existing sites lacks balanced structure and pore space.

Compare Ideal Soil to More Common Heavy Clay and Sandy Soils

Ideal Soil

- Comprised of 50% solid material and 50% pore space (for holding water and air)
- Different sized pores allow soil to drain properly while maintaining ideal moisture levels

Heavy Clay Soils

- Prevalent throughout much of the U.S., this soil lacks the air-holding pores of ideal soil
- This imbalance results in poor drainage, shallow roots and unhealthy plants

Sandy Soil

- This soil contains too many air-holding pores and not enough water-holding pores
- Sandy soil can't hold moisture or nutrients like ideal soil, increasing the risk of drought stress

Potting Soils

- Potting soils typically contain high amounts of organic compounds that decay over time
- Decayed material in this soil repels water, increasing the need for frequent watering

How Turface® Works.

The unique composition of Turface® Porous Ceramic Soil Conditioners improves soils in several ways:

- 1. Holds air, water and nutrients at the root zone.** Particles act like sponges that hold air, water and nutrients at the root zone for plants to absorb. Turface holds its weight in water and then slowly releases moisture back into the plant over time.
- 2. Reduces compaction and improves drainage.** Turface adds permanent pore space, reducing the natural compaction that occurs in most soils and allows water to drain properly.
- 3. Improves your soil structure.** Each type of soil has its own set of challenges. Turface is designed to enhance all types of soil.
 - » *In Compacted and Heavy Clay Soils* —Turface opens up these more compressed soils to air and water, making hard, clumpy soil much more workable. Turface stores air and moisture at the root zone where they would otherwise be sealed off. This allows for good drainage, deeper root growth and improved resistance to drought.
 - » *In Sandy Soils* —Turface absorbs water and increases the moisture-holding capacity of the soil, reducing watering frequency. Turface has a high Cation Exchange Capacity which captures fertilizer nutrients that otherwise would be lost.

Two Steps to a Beautiful Landscape:

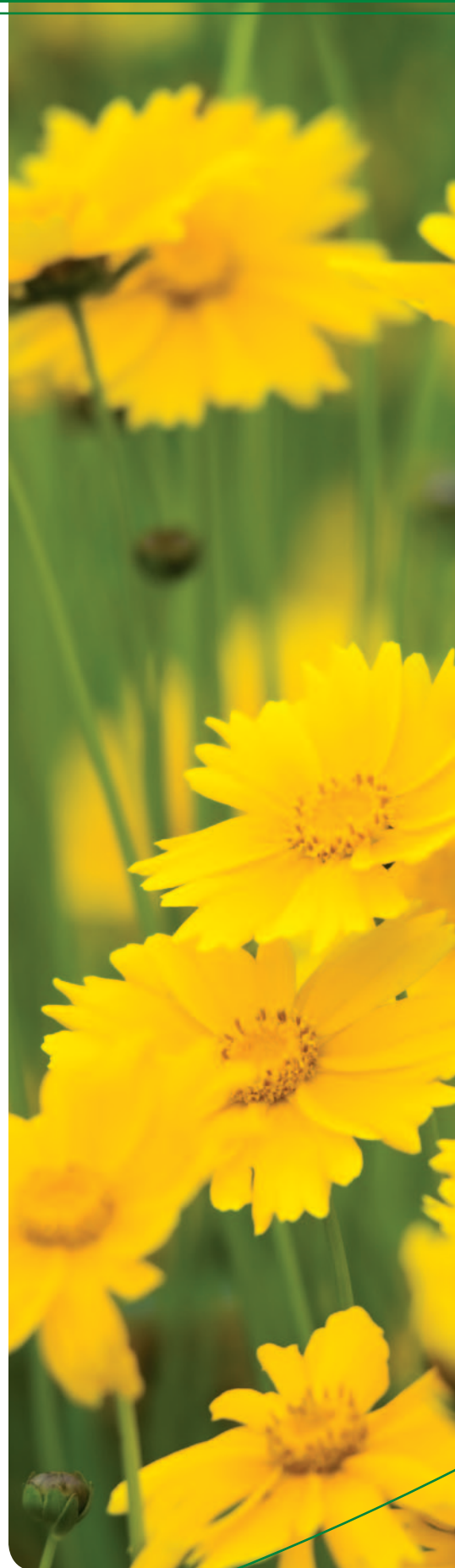
Improving your landscape beds doesn't have to be difficult. Just pour and till!

STEP 1: Pour one 50-pound bag of Turface Porous Ceramic Conditioner for every 20 square feet of your landscape soil.

STEP 2: Till in at a depth of approximately 4 inches.

Use the following amount of Turface to achieve a 30% rate at a depth of four inches:

- 2,500 lb of Turface to amend 1,000 sq ft
- 1,250 lb of Turface to amend 500 sq ft
- 625 lb of Turface to amend 250 sq ft
- 250 lb of Turface to amend 100 sq ft
- 125 lb of Turface to amend 50 sq ft





Application Rate for Conditioning Backfill for Individual Plantings:

The amount of Turface® required is dependent upon the size of the hole that is dug for the plant. The recommended hole size is 2.5 times the diameter and equal in depth to the pot or ball being planted. Add Turface to the planting soil that was removed at a ratio of one shovel of Turface to two shovels of soil.

Pot Size

- One gallon
- Two gallon
- Five gallon

30% Rate of Turface

- 7 lb mixed into backfill soil
- 16 lb mixed into backfill soil
- 39 lb mixed into backfill soil

When planting Ball & Burlap or larger container stock, utilize one 50-pound bag for a 3 foot diameter hole and four 50-pound bags for a 5 foot diameter hole.

Turface for Lawns and Turf

In construction, renovations or maintenance, Turface works to prevent damage to turf areas.

Established Lawns: In the Spring and Fall, core aerify lawns in a crisscrossing pattern and using a spreader add Turface at a rate of 735 pounds per 1,000 square feet. After topdressing seed, fertilize and rake Turface into holes and water thoroughly.

New Lawns: Apply Turface at a rate of 2,500 pounds per 1,000 square feet blended into the top four inches.



University Tested. Field Proven.

More than 30 years of university and independent research underscore the benefits of Turface®. And more than two decades of success on thousands of golf courses, athletic fields, public landscapes and even NASA reinforce their findings. They prove that Turface makes it easier to work soil, help plants grow faster, reduce the frequency of irrigation, make more efficient use of fertilizer, and produce healthier turf and ornamentals.

Independent Research:

- *Duke University, Department of Botany, C. H. Jaeger & H. Hellmers*
- *Michigan State University, Department of Horticulture, C.E. Wildon & F.L.S. O'Rourke*
- *Mississippi State University, Adolph Laiche & V.E. Nash*
- *Purdue University, Horticulture & Landscape Architecture Dept, West Lafayette, IN*
- *The Ohio State University, School of Natural Resources, Dr. Ed McCoy*
- *Turf Diagnostics & Design, Olathe, KS*
- *University of Missouri Turf Research Center, Dr. David Minner*
- *Washington State University, Department of Horticulture & Landscape Architecture, L. K. Hiller & D. C. Koller*

Ask your distributor about Turface® soil conditioner for your landscape.
To locate a distributor call (800) 207-6457.



Solutions for your Environment™

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