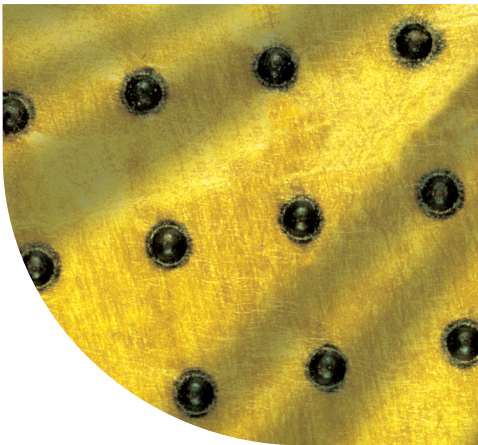
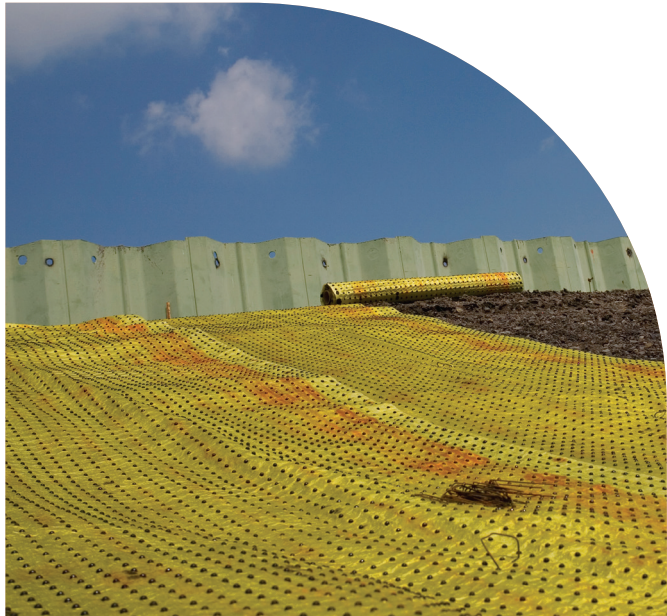


BIOBARRIER®



**DRAINAGE
SOLUTIONS, INC**

(317) 346-4110

www.drainagesolutionsinc.com



TYPAR

Geosynthetics you can trust

We Look Different. We Are Different.

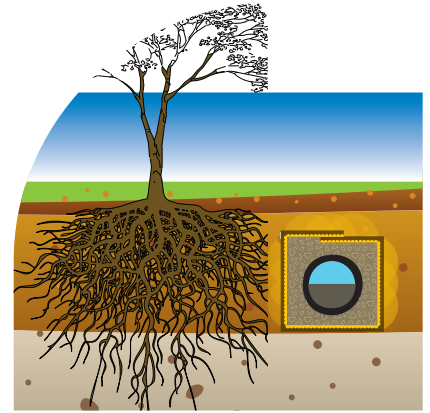
Hardscapes and landscapes are a big investment, and traditional methods of protecting them have meant repeatedly spending time, effort and money. But a one-time installation of BIOBARRIER Root Control System or BIOBARRIER® Weed Control System means years of security from roots or weeds growing where they're not wanted. Constant maintenance is a thing of the past with these easy-to-use systems, allowing you to spend your time and budget in other areas.

The interesting looking nodules on the durable geotextile drainage fabric are the secret to our success. They contain trifluralin, and the way it works is simple. Roots grow when root tip cells divide, and trifluralin prevents root tip cell division. Proven by more than 35 years of agricultural use, trifluralin is an effective, non-systemic herbicide; it simply creates a zone around your hardscape and landscape investments that inhibits root growth.

When BIOBARRIER is used for root control, tree roots reaching the zone of trifluralin are redirected, while roots outside the zone continue to grow naturally. When BIOBARRIER is used for weed control, the root systems of weeds do not grow in the trifluralin zone next to the fabric; roots of trees and shrubs in the same area are below the zone and are not affected.

We do look different and we are different; that's why we're effective. In fact, we guarantee BIOBARRIER's performance.

BIOBARRIER Surround System



Tree roots seek out air and moisture in the soil, causing expensive damage to underground infrastructure. BIOBARRIER'S unique geotextile design lends flexibility to surround infrastructure, extending the life of your investment

Removal and disposal of below-ground infrastructure is messy, time-consuming, and costly. In areas with aggressively rooting species, root treatment or complete replacement is required every one to five years. BIOBARRIER is guaranteed to prevent roots from crossing its protective membrane, eliminating long-term costs from clogging or fracturing caused by roots. With a permeable, non-toxic design, BIOBARRIER protects investments without impeding infiltration or drainage which maintains optimal system performance over time.

BIOBARRIER Surround System is used for

- Septic tanks and leach fields
- Perforated drain tile
- Stormwater drainage pipes
- Underground storage tanks
- City sewer and municipal water pipes

Product Selector

Root Control Width	12"	19.5"	24"	29"	39"	58.5"
Building Foundations					●	●
Burial Vaults/Tombstones						●
Containers			●	●	●	●
Curbs		●	●			
Drain Lines	●	●	●	●	●	●
Earthdams						●
Golf Greens/Tees/ Cart paths		●	●	●	●	
Landfills						●
Medians			●	●	●	
Paths	●	●	●	●		
Planting Beds		●	●	●	●	●
Pots	●	●				
Retaining Walls				●	●	●
Roads		●	●	●		
Roof Gardens					●	●
Septic Tanks/Fields						●
Sidewalks		●	●	●		

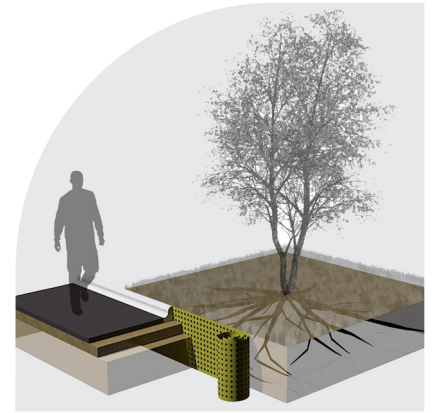
Root Control Width (continued)	12"	19.5"	24"	29"	39"	58.5"
Swimming Pools		●	●	●	●	
Tennis Courts		●	●	●	●	
Underground Pipes/ Cables	●	●	●	●	●	●
Underground Storage Tanks						●
Utility Substations		●	●	●	●	

BIOBARRIER Root Control is available in 20 foot or 100 foot roll lengths

Weed Control width	29"	39"	58.5"
Fence Rows	●	●	●
Guardrails	●	●	●
Landscaping	●	●	●
Pavers	●	●	●
Street Medians	●	●	●
Tombstones	●	●	
Tree Skirts			●
Utility Substations			●

BIOBARRIER Weed Control is available in 20 foot or 100 foot lengths

BIOBARRIER Root Control System



Trees and shrubs add value and beauty to property, except when their roots grow into hardscapes, such as sidewalks, buildings and roadways, or into landscaped areas, which are well watered. Then the damage can cost you plenty.

Used vertically, the BIOBARRIER Root Control System protects adjacent structures from root damage. Guaranteed protection for 15 years reduces the chance of injury and potential liability, as well as the costs associated with preventative maintenance and damage repair.

BIOBARRIER works invisibly to deflect roots. Its nodules slowly release Trifluralin, preventing root tip cell division, which is the method by which roots grow. A small amount of Trifluralin is constantly released and as it biodegrades, is continuously replaced, ensuring the effectiveness and long life of the herbicide zone.

While physical barriers alone can create root girdling, BIOBARRIER stops continued root growth allowing for healthier trees. Placed beside the object to be protected, BIOBARRIER creates a zone of protection on all sides of the nodules. Roots growing into the zone are redirected while roots outside the zone continue to grow normally; tree health is not impacted since Trifluralin is not systemic.

Since the system includes a standard drainage fabric, BIOBARRIER allows water, air and nutrients to pass through, not adversely affecting soil hydrology.

Along Hardscapes

BIOBARRIER is most frequently used along hardscapes such as sidewalks, retaining walls, parking lots, buildings, swimming pools, foundations and other structures to prevent damage from roots. Preventing that damage for 15 years reduces the chances of injury and potential liability, as well as the costs associated with preventive maintenance and damage repair.

Under Pots

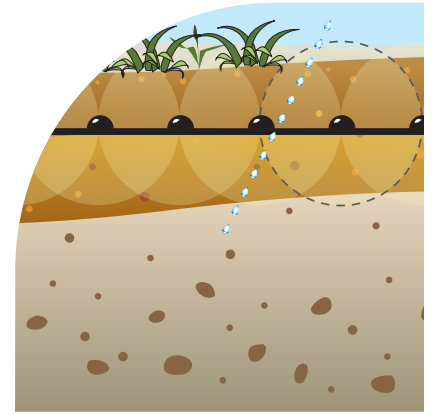
Used inside the larger pot, BIOBARRIER Pot-N-Pot prevents roots from growing through drain holes and attaching to native soil. Because the roots are contained within the pot, less labor is required for harvesting and less damage to roots is caused as trees are removed.

In Dams/Levees

Tree roots can grow into the mechanisms of dams and levees, causing potential havoc and the failure of equipment that can result in flooding. BIOBARRIER ensures the integrity of the dam or levee from roots; at the same time, it allows trees and shrubs to beautify the area.



BIOBARRIER Weed Control System



Installed horizontally below three inches of stone/wood mulch, the BIOBARRIER weed control system blocks weeds using two layers of defense: chemical and physical.

Guaranteed for 10 years, weeds are unable to develop a strong root system in the mulch layer while ornamental tree and shrub roots expand unimpeded below the Trifluralin emitting fabric layer, eliminating unwanted competition and maintenance costs.

Weeds not only create an unsightly appearance, they compete with desired plants for nutrients and water. Traditional methods of dealing with weeds - pulling them by hand, which is not always effective since roots can break and remain; using sprays that can drift into desirable plants or contaminate water; or mechanical weeding - places workers in unsafe situations. In addition, the time and money necessary for this kind of constant maintenance can be prohibitive.

Trees and shrubs, which have roots below the trifluralin zone, can continue to grow and support the plant. Because BIOBARRIER is porous, water, air and nutrients can flow through it and not disturb the soil's hydrology. The trees and shrubs you want around will still be able to get the ingredients necessary for their good health.

Lightweight BIOBARRIER Weed Control is easy to install because it follows ground contours. Remove stones, debris and vegetation, and unroll the fabric. Pull the fabric close to the trunks of trees and shrubs; it will not hurt to touch them because the herbicide only affects root tips. Cover it with two inches of stone, mulch, soil or other ground cover. Place any leftover fabric in the package it came in, and use the provided tie to seal it to prevent the loss of trifluralin. Complete installation instructions are available and should be followed for proper results.

Around Trees

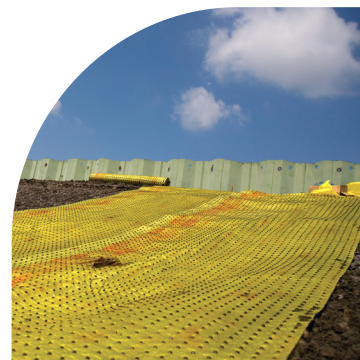
Weed growth around trees robs them of necessary water and nutrients. In addition, weeds are unattractive and can be harmful since mowers and weed eaters can cause damage to trunks if they get too close. Mulch is frequently used to reduce weed growth, but in many cases, too much is used, which can also damage tree trunks. The Biobarrier Tree Skirt reduces the amount of mulch needed and is pre-cut in two convenient sizes for ease of use. Landscape pins are provided.

In Dangerous Locations

Controlling weeds in sensitive areas such as around highway guardrails, street signs and utility substations can put workers in jeopardy, raising the possibility of injury. Guaranteed for 10 years, Biobarrier Weed Control is a long-term solution, which results in reduced maintenance and improved appearance.

In Landscaped Areas

Landscaped areas are well-watered and richly fertilized, ideal conditions for weeds as well as for more desirable plants. Strategically placed, the zone created by Biobarrier Weed Control inhibits weed root development while allowing trees and shrubs to grow.



Product data sheets, case studies, installation guides and project information request forms are available on request or can be downloaded from www.typargeosynthetics.com. Please contact our sales team for reference projects or for further advice.

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A leader in material technology application

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