Presby Environmental, Inc.

The Next Generation of Wastewater Treatment Technology

TECHNICAL BULLETIN

Significant Differences between Enviro-Septic® and GEO-flow

Abstract: *GEO-flow pipes manufactured by ADS are not interchangeable, functionally equivalent or acceptable substitutions for use in an Enviro-Septic® System design. There are important functional differences, and Enviro-Septic® design criteria are product specific. Enviro-Septic® has been thoroughly tested, while GEO-flow's treatment capabilities have not been documented.*

Background:

To provide some historical perspective, Enviro-Septic® was invented by David Presby specifically to solve what he found to be deficiencies in other large diameter gravelless pipe such as GEO-flow and SB2. The resulting "differences" between GEO-flow and Enviro-Septic® were significant and substantial enough to earn Presby numerous US Patents. Confusion regarding the two products has been created by GEO-flow's unsupported claims that their product is "functionally equivalent" to Enviro-Septic®.

All interested parties deserve to understand the differences in the two products in order to make an informed decision about which product to use based on facts, not unsubstantiated marketing claims or superficial similarity in appearance. Presby Environmental has an established track record of a commitment to scientific testing and to providing free, professional technical support and training to anyone designing, installing, using or troubleshooting an Enviro-Septic® system.

Differences you can see:

There are important physical differences between Presby Environmental's Enviro-Septic® pipes and the GEO-flow product from ADS. (These differences are also summarized on the attached chart.) The primary difference in the design of the two products is the intermediary layer between the corrugated pipe and the geo-textile fabric; GEO-flow uses a grid material, and the Enviro-Septic® System uses a dense mat of coarse, randomly-oriented plastic fibers. While the GEO-flow grid serves only to keep the fabric from pressing against the pipe, the Enviro-Septic® fibers serve this purpose while at the same time providing substantially increased surface area for bacterial activity, ensuring sufficient oxygen supply and protecting the bacterial treatment surface that forms on the inside of the fabric. The dense mat of plastic fibers also acts like a filter, stripping out solids from wastewater as it passes through, protecting the bacterial surface from clogging. Enviro-Septic® also has skimmer tabs, which maximize retention of solids within the pipe, protecting the fiber mat and geo-textile fabric from clogging.

In addition, there are other design enhancements which the Enviro-Septic® pipe has that GEO-flow does not: the pipe's specially designed ridges also create additional surface area, which works to cool the effluent; this cooling enhances separation of greases and solids, enabling the Enviro-Septic® system to retain them inside the pipe and fibers,

preventing them from reaching the bacterial treatment surface and protecting the underlying soil from clogging.

Differences you can't see:

As a result of its unique product features, the Enviro-Septic® system actually treats the wastewater before it makes contact with the soil, creating a combined treatment and dispersal system. According to their own literature, GEO-flow is an "…alternative to the stone and pipe components of a conventional effluent disposal system" (emphasis added). Since there is no test data for GEO-flow, any "comparison" of the two products' functionality is subjective and speculative. In contrast, Enviro-Septic® has been subjected to repeated, rigorous test protocols in order to prove how well it treats wastewater. We invite you to pose the following question to GEO-flow sales representatives, "What is the expected quality of effluent exiting a GEO-flow system?" Third-party testing has consistently proved that Enviro-Septic® works significantly better than conventional systems and, in fact, works better than many expensive, complicated mechanical treatment devices, achieving tertiary treatment results (per US EPA Guidelines).

Differences in the two products' design criteria and State Approvals:

While GEO-flow and Enviro-Septic® are both approved for use in the states of New Hampshire, Maine and Massachusetts, their approvals and design/installation criteria are **not** identical, and the products should not be considered "interchangeable," "substitutes" or "functionally equivalent." Notably, in the State of New Hampshire, Enviro-Septic® is the **only** product approved for installation with as little as 30 inches to the seasonal high water table. Our technical materials such as Design and Installation manuals, schematics and instructions are product specific and were developed based on years of testing and experience with the Enviro-Septic® system. Similarly, our certification training is also product specific; being certified to design or install GEO-flow does not certify someone to design or install Enviro-Septic®.

Conclusion: Our purpose is to educate designers, installers and customers about the important differences between the two products so that professionals and consumers can make a fully informed decision when selecting their septic system components. If you have any questions or concerns about the differences between Enviro-Septic® and GEO-flow which we have not answered here, please contact us and we will do our best to provide additional information.

Prepared by,

Presby Environmental, Inc.
143 Airport Road
Whitefield, NH 03598
(800) 473-5298
info@presbyeco.com
www.PresbyEnvironmental.com

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SUMMARY OF SIGNIFICANT DIFFERENCES BETWEEN ENVIRO-SEPTIC® AND GEO-FLOW®		
ENVIRO-SEPTIC®	**GEO-FLOW®**	**SIGNIFICANCE**
Treatment System, effluent treated before dispersed to soil	Disposal System, relies on the soil to provide treatment	Enviro-Septic® discharges treated effluent, reducing the possibility of groundwater contamination
Layer of coarse, randomly oriented fibers between pipe and fabric	Rigid grid between pipe and fabric	Enviro-Septic®'s random fibers strip finer suspended solids, protecting the bacterial surface, providing significantly more surface area for bacterial activity and facilitating aeration.
Skimmer Tabs	No skimmer tabs	Enviro-Septic® system retains grease and solids inside pipe, protecting the bacterial treatment surface and preventing clogging of underlying soils.
Bendable to 90 degrees	Rigid and non-bendable	Enviro-Septic® provides greater design flexibility for unusually shaped systems
Geotextile fabric is stitched to hold it in place around pipe	Fabric attached to pipe with plastic straps	Enviro-Septic® components stay securely in place, preventing shifting of fabric that could cause discharge of untreated effluent or allow soil materials to enter the pipes.
Can be installed under traffic-bearing surfaces	Not intended for use below traffic-bearing paved or unpaved surfaces	Greater design flexibility with Enviro-Septic®
Substantial Scientific Test Data	No publicly available test data	Enviro-Septic®'s treatment capabilities confirmed by test results; effluent quality exceeds NSF-40, US EPA recommendations, and BNQ Advanced Secondary criteria.
Exceptional Quality Control Routine Audits by BNQ	Numerous different manufacturing facilities, variance in materials	Enviro-Septic® product consistently of the highest quality
Free, professional technical support, documentation, training & certification	Minimal technical support; minimal design and installation instructions	Reflects PEI's commitment to providing designers and installers with the resources necessary to maximize Enviro-Septic® product's effectiveness and reliability
Separation Distance to SHWT in NH is 30 inches	Separation Distance to SHWT in NH is 36 inches	Enviro-Septic® has a long history of successful use in New Hampshire. Our ITA approval is based on an excellent track record of performance in the field and documented test results.