



GeoMat™ Leaching System Description

The GeoMat Leaching System (GLS) is comprised of a core of fused, entangled plastic filaments with a geotextile fabric bonded to one side. A pressure distribution line is installed on top of the core and covered with another layer of geotextile fabric. GLS is designed for maximum treatment and infiltration of wastewater into soil, in certain instances it is used for subsurface irrigation. GLS can be utilized with pretreated wastewater or septic tank effluent, if B.O.D. is accounted for.

Although typically installed in a horizontal orientation, GLS is modular and can also be installed in vertical and multi-planer applications. It is available in 1 x 6, 1 x 12 and 1 x 39 inch widths. A pressurized distribution pipe typically runs the entire length of the GLS and provides for uniform application of wastewater down the entire length. Additionally, GLS can be configured with a time dose pump station for greater flow equalization. The combination of pressure dosing and flow equalization serves to reduce the peak hydraulic loading. In certain instances, GLS can also be configured for gravity applications.

GLS is designed for maximum oxygen transfer. The relatively narrow profile of GLS, the shallow burial depth and the uniform loading serves to maximize the oxygen transfer efficiency to the wastewater and the associated microbial community. This results in increased removal of pathogens, B.O.D. and nutrients such as nitrogen and phosphorus. The high level of oxygen in and adjacent to the GLS also serves to inhibit excess accumulations of biomat from developing and prematurely clogging the GLS. This further improves the long term acceptance rate of the leaching system.

GLS has many similar benefits to drip irrigation, but it is significantly less mechanically complex and provides for massive surface area when compared to drip emitters. GLS also shares some similarities to low pressure pipe systems; however, it is significantly easier to install and has a much lower profile. The distal head pressure of the GLS is fully adjustable through valving on the distribution manifold, which is often located in the pump station. A cleanout/distal pressure monitoring port is installed on the terminal end of each of the lateral lines. The lateral lines can be readily cleaned, flushed and jetted.

When soil conditions permit, GLS can be installed directly in the "A" horizon. The low profile provides for a lower landscape profile. This can be especially helpful when depth to ledge or groundwater is present. When fill is required, it should meet regulatory requirements. Fill specifications can be adjusted for site specific conditions, when necessary and approved by the design engineer. The narrow profile of GLS requires less fill depth than many other systems, often resulting in a cost savings.

When GLS is utilized for high strength wastewater such as restaurants, etc., it is recommended that a pretreatment system or a SoilAir™ system be utilized to prevent excess biomat from forming.

Manufactured under one or more of the following U.S. Patents: 6,415,647, 6,7:26,401, 6,814,866, 6,887,383, 6,923,905, 6,959,882, 6,969,464 GeoMat is a Trademark of Geomatrix, LLC - All rights reserved. © 2006

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