TriAx® | FilterGrid

TENSAR® FilterGrid™ Geogrid

OVERVIEW

Tensar®

Tensar® FilterGrid Geogrids combines TriAx Geogrids's superior performance with the separation of a non-woven geotextile.

Tensar® FilterGrid™ Geogrid

When stabilizing paved or unpaved structures it is important to not only consider the appropriate geogrid product and thickness of granular fill, but also whether adequate filtration and separation of dissimilar materials will be maintained throughout the life of the structure. While Tensar TriAx geogrid frequently provides adequate confinement of the fill to achieve both filtration and separation, there are times when specifiers recommend a geotextile in conjunction with the geogrid. FilterGrid provides the superior performance of Tensar's patented TriAx technology along with the added assurance of a non-woven geotextile – all in a single composite product.

BENEFITS OF FILTERGRID

- **Multi-Functional:** Provides aggregate stabilization, filtration, and separation.
- **Economical:** Optimizes the structural thickness to save time and money.
- **Eco-Friendly:** Permanent, safe alternative to the use of chemical stabilization agents.
- **Simple and Efficient:** Rather than installing a geotextile and TriAx in two separate steps, FilterGrid deploys as a single layer – saving time and labor costs.

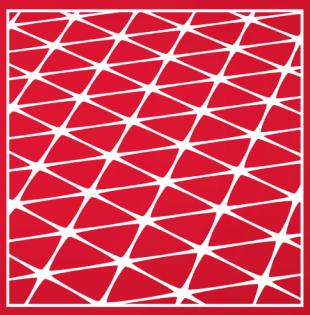
HOW FILTERGRID WORKS

FilterGrid stabilizes working surfaces, such as paved and unpaved roadways, airfields, crane pads and other working surfaces by providing confinement, separation and filtration. FilterGrid combines the stabilization benefits of TriAx with the separation and filtration benefits of a non-woven fabric.

TriAx's unique structure provides a high degree of in-plane stiffness through a mechanism known as lateral restraint. Lateral restraint is the ability to confine and stabilize aggregate particles within the plane of the geogrid. As granular base courses are stress-dependent materials, the confinement offered by properly designed, stiff geogrids improves the modulus of an aggregate material, improves load distribution, and maintains that modulus over a much longer period of time compared to an unstabilized aggregate. This confinement improves speed of construction, reduces fill requirements, and enhances the performance and durability of these working structures over time.

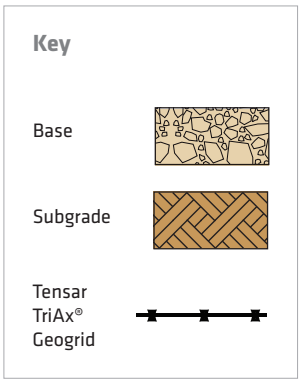
The non-woven filter fabric attached at the nodes of the TriAx provides separation and filtration. Fine grained subgrades, especially those consisting of low plasticity silts and clays, present separation and possibly filtration needs. Tensar's SpectraPave Software provides tools to assess if a separator is needed. This tool is based on guidance outlined in many resource documents including those of Cadergren, Terzaghi, Peck and Mesri where piping and uniformity ratios are set based on the soil type.

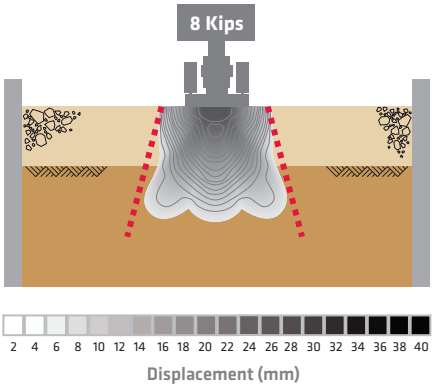
As a snowshoe distributes load over soft snow, Tensar FilterGrid confines aggregate to better distribute in-service loads over soft subgrades.

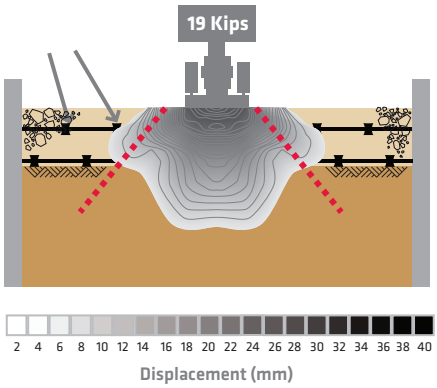


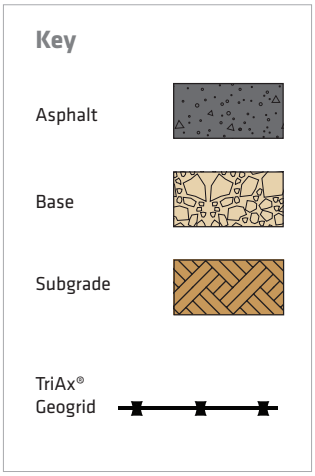
Tensar® Geogrids

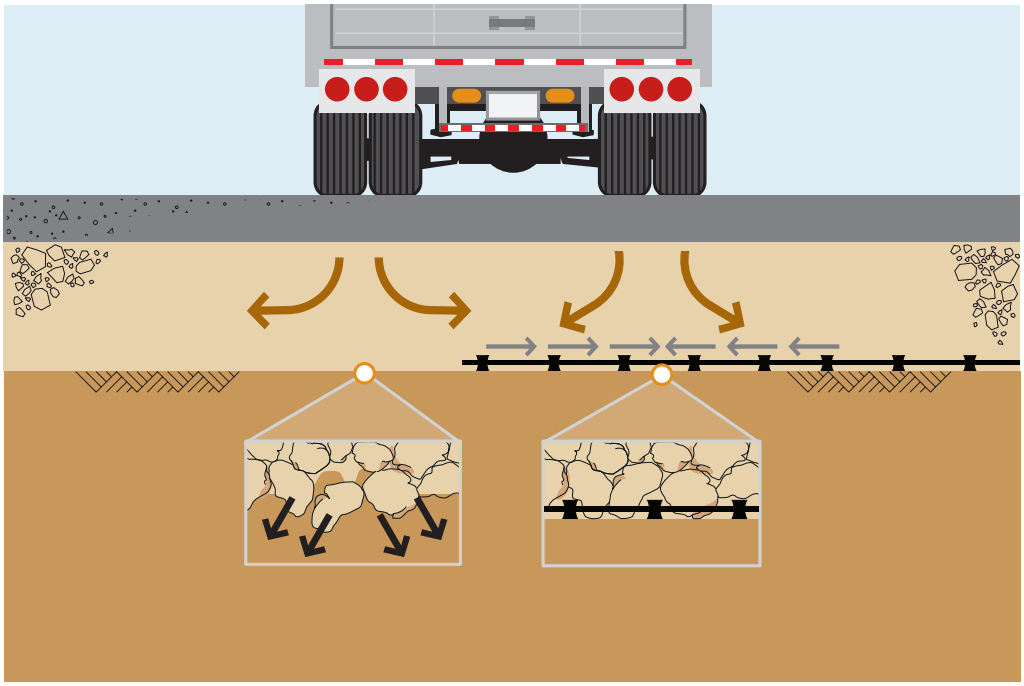
Tensar TriAx Geogrids stand the test of time, offering outstanding performance due to their stiff interlocking capability. For more information, visit www.TensarCorp.com.









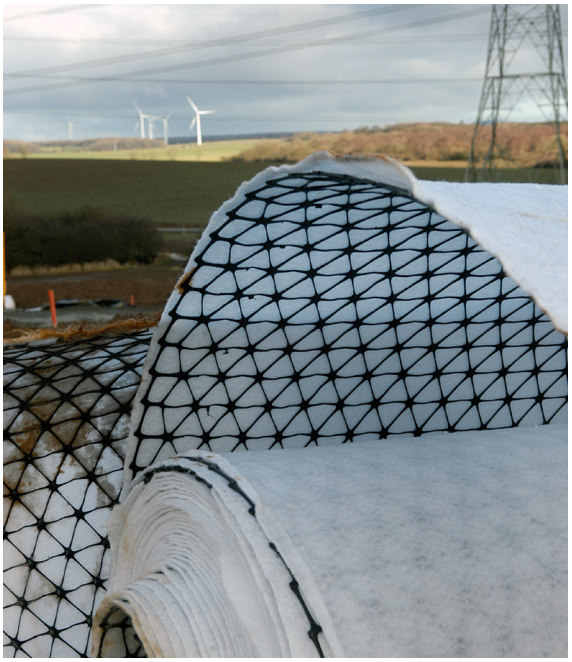


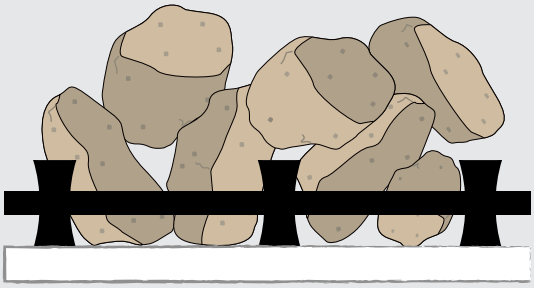
FilterGrid: Unique in the Geosynthetic Market

THOUGHTFUL DESIGN

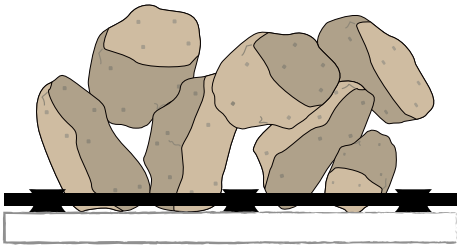
FilterGrid incorporates the most tested, proven, reliable, and advanced geogrid technology in the market: **Tensar TriAx Geogrid**.

Lamination is applied only to the nodes of the TriAx geogrid, allowing full aggregate strike-through to be achieved when installed, making FilterGrid superior to other offerings in the market. This maximizes the aggregate interlock, providing superior performance compared to other composite biaxial geogrid/fabric products. If aggregate does not fully strike-through the geogrid component (or the geogrid straps are on both sides of the fabric), there is very limited confinement that can take place.

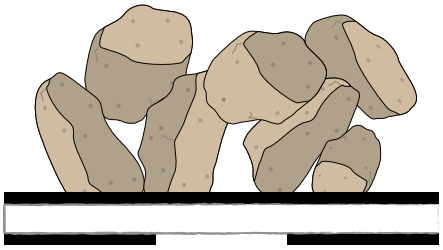




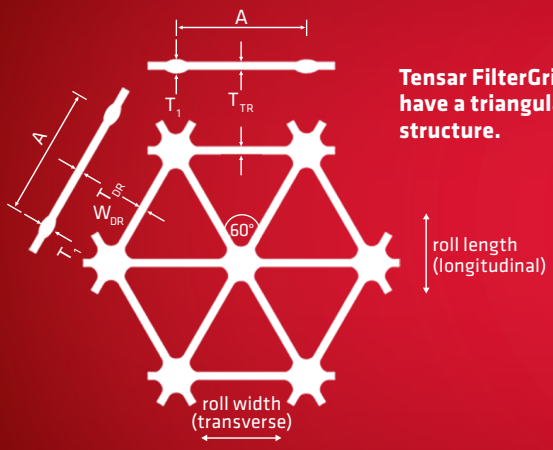
FilterGrid - Node Lamination
Node lamination process reduces trampoline effect of fabric found with full lamination. Allowing better interlock of aggregate through TriAx openings. Thicker rib height and higher aspect ratio allow for improved interlock.



Biaxial (BX) - Full Lamination
Full lamination creates a trampoline effect, not allowing aggregate to fully engage with geogrid. Thin ribs don't engage as well with aggregate.



Fabric with Straps
Aggregate is not constrained the same when fabric barrier exists between transverse and longitudinal ribs. Trampoline effect does not allow aggregate to fully engage with ribs.



Tensar FilterGrid Geogrids have a triangular aperture structure.

› As a snowshoe distributes load over soft snow, Tensar FilterGrid confines aggregate to better distribute in-service loads over soft subgrades.

APPLICATIONS

Tensar FilterGrid offers unrivaled performance in subgrade stabilization and pavement design applications. Combined with the technical support and expertise of the Tensar team, FilterGrid is another technology that can allow for the building of low cost, long lasting and more reliable trafficked surfaces.

Subgrade Stabilization
Weak subgrades are a common problem during the construction of haul roads, parking lots, working surfaces, staging areas, storage yards and other unpaved structures. FilterGrid provides a simple solution for stiffening the granular platform and reducing subgrade stress. Enhanced constructability greatly improves site access while significantly reducing up-front costs and future maintenance.

Pavement Optimization
Paved systems often fail prematurely because of progressive lateral displacement and weakening of the granular base course. FilterGrid improves the overall stiffness of roadways, parking lots, taxiways, runways, aprons, intermodal facilities and other structures that support vehicular traffic, leading to enhanced performance. Improved performance of trafficked sections optimizes overall life-cycle costs by minimizing maintenance and rehabilitation intervals common to both flexible and rigid pavements.

TENSAR SERVICES AND DESIGN SUPPORT

Superior Technical Support
Even the most technologically superior products and systems need the right combination of expertise and support to perform at their maximum potential.

We put our full resources and decades of technical knowledge and practical experience behind TriAx Geogrid to ensure optimum results. Our technical team of engineers and sales managers is ready to support your most challenging project requirements using the highest quality products, services and design methods.

Design Assistance
The goal of Tensar is to ensure our clients receive the best performance and most cost-effective solution. The Tensar team and our worldwide distribution network are dedicated to providing the highest quality products, service and design support. With a technically trained sales staff and an in-house engineering department, Tensar stays at the forefront of today's design technology and market trends.

For more information on TriAx Geogrids, please visit www.tensarcorp.com, call 800-TENSAR-1, or e-mail info@TensarCorp.com.

TriAx® | FilterGrid

FilterGrid can be installed quickly and easily so projects stay on schedule.

Tensar® Geogrid Roll Characteristics

		Roll Width		Roll Length		Roll Area		Roll Weight	
Product	**Application**	**(m)**	**(ft)**	**(m)**	**(ft)**	**(m^2)**	**(SY)**	**(kg)**	**(lb)**
FG30	Subgrade Stabilization	4	13.1	50	164	200	239.1	68.5	151
FG60	Subgrade Stabilization	4	13.1	50	164	200	239.1	88.9	196
FG90	Subgrade Stabilization	4	13.1	50	164	200	239.1	104.3	230
FG7	Pavement Optimization & Subgrade tabilization	4	13.1	50	164	200	239.1	98.9	218

Coal Seam Gas Drilling Platform (Manchester)

Created a stable working platform over peat for drilling operations

Glenchamber Wind Farm (Scotland)

Ensured access roads were built in time for the arrival of turbines for a wind farm in Dumfries and Galloway.

Tensar®

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