



# StrataTex HSR™

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Introducing the future of  
high strength geotextiles.

Welcome to the next generation of soil reinforcement.

Meet StrataTex HSR™.

A revolutionary high-performance, flexible polyester geotextile.

## How is StrataTex HSR™ made?

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StrataTex HSR™ is manufactured using a high-grade polyester yarn with special high tenacity and low creep properties knitted into a stable network.

It is differentiated from other geotextiles by its low elongation, superior stress-strain values, and high permeability performance.

StrataTex HSR™ is manufactured in a state-of-the-art plant located in India, fully tested and certified in GAI-LAP accredited labs and is CE and ISO certified.

**The process involves 2 phases:**

- **Beaming**
- **Knitting**



## The StrataTex HSR™ Advantage

Here are just a few of the reasons StrataTex HSR™ could be the right choice for you:

- StrataTex HSR™ has a wide range of ultimate tensile strengths up to 54,816 lb/ft for uniaxial and 20,556 lb/ft in the biaxial series.
- Our unique linear knitted fibers allow StrataTex HSR™ yarns to reach full tensile strength at low elongation with lower creep.
- It has wider widths (up to 19ft) and customised lengths, reducing overlaps and wastage.
- StrataTex HSR™ allows higher water flow due to its excellent permeability characteristic.
- The knitted yarns mean that StrataTex HSR™ fabric is much more stable during handling.

# Using StrataTex HSR™

Let's take a closer look at some situations where StrataTex HSR™ can be applied effectively.

## Basal reinforcement for embankments on soft soil

Embankments over soft soil need basal stabilisation over the construction period as well as an initial serviceability period till the foundation soil gains sufficient shear strength due to consolidation.

Basal reinforcement helps distribute the load over a wider area and provides resistance against shear failure due to tensile strength improving the safety against bearing and shear failure of the embankment.

Here, StrataTex HSR™ caters to two applications:

- Separation
- Reinforcement

Since the basal reinforcement system consisting of geosynthetic reinforcement and granular fill is to be placed on soft soil, a separator is required to be placed on soft soil to avoid mixing and loss of granular fill within the soft layer.

StrataTex HSR™ provides separation along with reinforcement, eliminating the need for an additional separation layer and reducing the installation time of geosynthetic layers by half. It's an economical solution compared to conventional ones or the usage of multiple geosynthetic layers.



## Load transfer platform for piled embankments

Embankments constructed over piles, on soft ground, need a load transfer platform with basal reinforcement spanning across pile caps to ensure transfer of embankment load onto the piles.

Using StrataTex HSR™ ensures separation and tensile strength provision to the load transfer platform system catering to both separation and reinforcement in one geosynthetic layer.

It ensures smooth load transfer from the embankment to the pile caps providing the required serviceability to the embankment without excessive deformations in the region between pile cap spacing.

With proper design of basal reinforcement using StrataTex HSR™, the pile cap size and pile spacing design can be optimised to ensure economy along with safety

These load transfer platforms are designed in line with international guidelines such as British Standards and FHWA (Federal Highway Administration) in the USA.



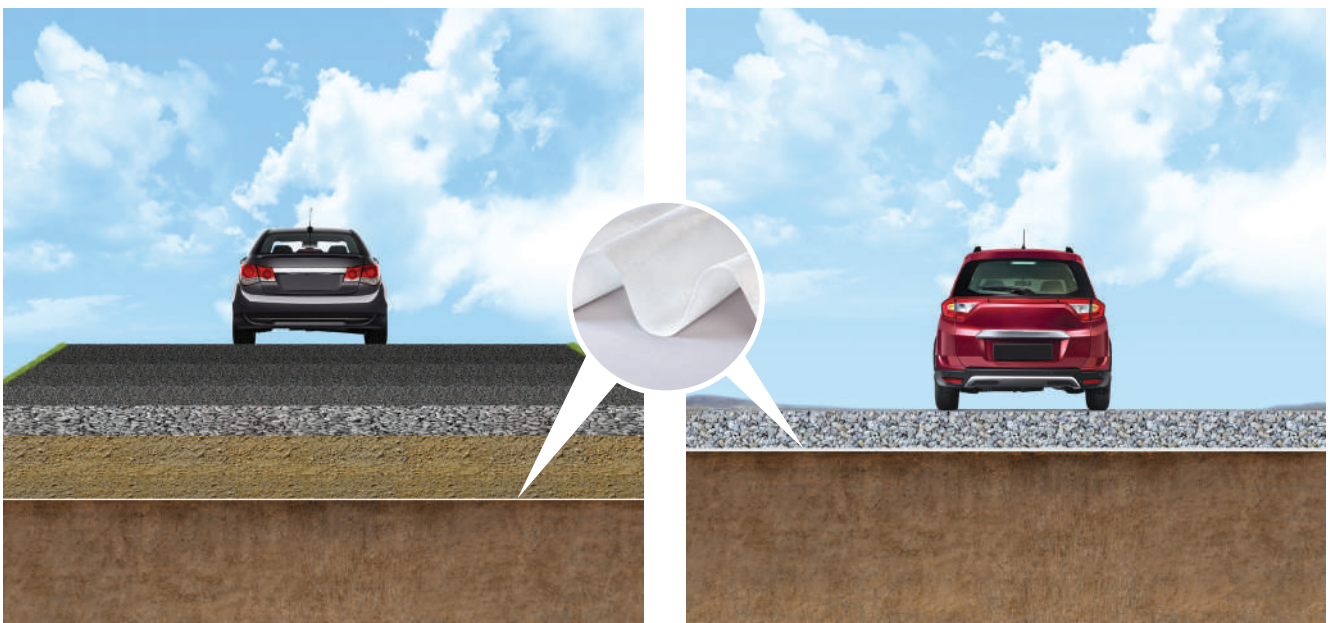
## Paved and unpaved roads

Pavements which are to be constructed on expansive or slushy soils with soft clay as subgrade, need a strong long-lasting separator above subgrade to ensure performance over the service life of the pavement.

Using StrataTex HSR™ on subgrade not only provides the separation required but also improves the modulus of the granular layer above subgrade owing to its tensile modulus.

StrataTex HSR™, when placed above subgrade, improves the modulus or layer coefficient of the granular material above by reinforcing that layer based on friction, interaction, and tensile strength properties of StrataTex HSR™.

It possesses excellent permeability and strength compared to nonwoven geotextiles which cater to a higher flow of water, ensuring serviceability performance of the pavement.



# Strata Professional Services

## Professional Solutions

Our International Support Services team addresses the evolving needs of the infrastructure sector. We provide eco-friendly, cost-effective geotechnical solutions. With a broad spectrum of innovative, high-quality products, precision engineering, and timely, failsafe installation, surpassing customer expectations has become par for the course at Strata.

Strata's out-of-the-box problem-solving dexterity has pushed the boundaries of what is possible and performed engineering feats as diverse as our products.

Beyond supplying quality products and innovative designing engineering solutions, Strata also offers fully integrated construction capabilities and specialised contracting in select global markets.

## Design, Application, and Supply

Strata not only provides geotechnical products, but our team of engineers help you with your turnkey project by supplying you with technical knowledge and support as to how our products can help you finish your projects on time while keeping costs down. The design team is equipped with software and knowledge to provide innovative and cost-effective solutions complying with international guidelines such as BS standards, FHWA, and AASHTO guidelines etc.

The team of engineers at Strata provides complete solutions along with prelim and detailed construction drawings, method statements, plus any other technical communication based on project/site-specific requirements.

## Comprehensive and In-depth

To ensure the smooth installation of Strata products, our team is available to offer full technical guidelines like site-specific method statements, tender proposals and documents, and a wide range of case studies and independent certification documents.



[www.strataglobal.com](http://www.strataglobal.com) | [www.geogrid.com](http://www.geogrid.com) | [technical@strataglobal.com](mailto:technical@strataglobal.com)  
+91 22 4063 5100 | India, Spain, USA

