

BASAL REINFORCEMENT

BASETEX HIGH-STRENGTH GEOTEXTILES



► Tensor® Technology – proven, practical solutions and the know-how to get them designed and built.

Tensor Technology is widely adopted for Pavement Optimisation and Subgrade Stabilisation to improve the structural performance of paved roads and unbound roads and platforms. Tensor Technology is also adopted for Earth Retaining Systems for cost effectiveness and versatility over other traditional methods. By delivering real savings in cost and time, Tensor Technology can help you improve the bottom line on your project as well as preserving the invested capital.



Reinforcing Embankment Foundations

Basetex high-strength geotextiles can be used to reinforce the base of embankments to intercept failure surfaces which may extend into a low-strength foundation soil. Basetex geotextiles can also be used to reduce or avoid staged construction periods, helping to keep projects on time and within budget.

Manufactured using a weft-insertion process, the Basetex range possesses quality-control strength up to 1200kN/m (longitudinal direction) and 50kN/m or 100kN/m (transverse direction). The load-bearing yarns are 100% high-tenacity polyester and provide excellent creep performance and high tensile modulus.

The high molecular weight of the polyester yarn ensures that the products are highly resistant to environmental damage within the range of normal pH and temperatures encountered in soils.

Basetex products provide several advantages in the installation and construction of basal reinforcement. The load-bearing yarns are laid across one another and then stitch bonded, properties which allow the fabric to be both rigid when stretched over piles or alternatively able to follow the natural contours of the earthworks.

BASETEX CHARACTERISTIC PROPERTIES ENABLE THE YARN TO:

- Remain linear so that they are able to reach their full tensile strength without the initial elongation associated with woven yarns

This then enables:

- Immediate soil to fabric load transfer

THE BENEFITS OF BASETEX CAN INCLUDE:

- Allows rapid construction
- Avoids or accelerates staged construction
- Avoids excavation and replacement
- Reduces loss of fill into weak foundations
- Enables safe spanning of voids
- Allows pile spacing to be increased, pile caps decreased and raking piles eliminated in piled embankments

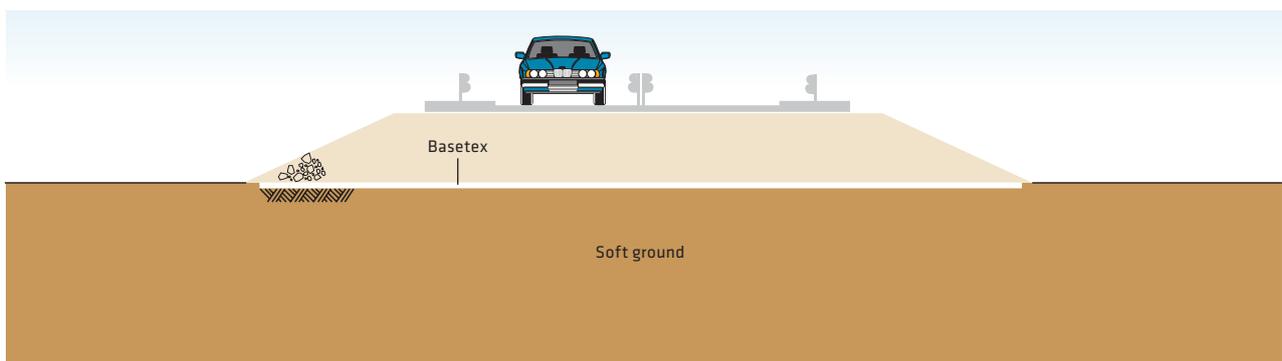
Tensor Design Service

Tensor's experienced civil engineers are able to help take your project onto the next stage. Our Design service is on-hand to provide standard Application Suggestions to establish viability of Tensor's products and systems and enable planning costs, right through to preparing certified detailed design and construction drawings for using Tensor products

and systems on your project. Upon request, we can provide all necessary design certification and working calculations in a form ready for checking, with drawings issued for construction as well as all the crucial specification and installation details.



Basetex installation at Oran airport in Algeria providing permanent stability to a load bearing surface with rapid and cost saving installation.



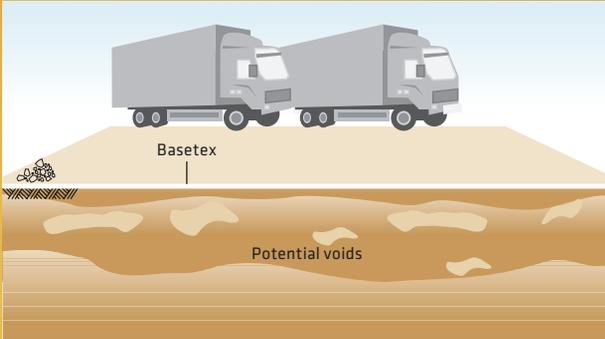
Basetex is usually placed as low as possible within the embankment foundation to maximise stability.

Spanning of Voids with Tensar Basetex

Tensar Basetex can be installed in single or multi-layers to suit embankment design and construction.

The high design strengths of Basetex fabrics allow the product to span subterranean voids in areas prone to

subsidence. This ensures long-term void spanning and the control of weak ground, which has the potential to collapse with catastrophic effects.



Basetex can provide safe, early warning of the development of voids below earthworks.



Garrion Bridge, Scotland where Basetex avoided the need for expensive grouting of mineworkings below the road.



Installation of Basetex in a Tensioned Membrane Load Transfer Platform over bored piles on the A228 highway embankment over alluvium in Kent.

Load Transfer Platforms

When minimal settlement can be tolerated, embankment foundations are often piled to provide a firm support. Basetex can be designed to reinforce fill and create a Load Transfer

Platform to span and distribute embankment loads onto the piles or vibro concrete columns which bear on firmer strata below. This avoids the cost of a concrete raft or ground beams.



Tensar Basetex in a Tensioned Membrane Load Transfer Platform supporting an embankment for high speed railway.



The standard roll size of Basetex is 4.4m wide x 100m long which allows very rapid installation.

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Contact Tensar or your local distributor to receive further literature covering Tensar products and applications.

Also available on request are product specifications, installation guides and specification notes.

The complete range of Tensar literature consists of:

- ▶ **Tensar® Geosynthetics in Civil Engineering**
A guide to products, systems and services
- ▶ **Subgrade Stabilisation**
Stabilising unbound layers in roads and trafficked areas with a Tensar MSL
- ▶ **Spectra® Pavement Optimisation System**
Improving the structural performance of whole pavements with a Tensar MSL
- ▶ **Asphalt Pavements**
Reinforcing asphalt layers in roads and trafficked areas
- ▶ **TensarTech® Earth Retaining Systems**
Bridge abutments, retaining walls and steep slopes
- ▶ **Railways**
Mechanical stabilisation of track and sub-ballast
- ▶ **TensarTech® Plateau™**
Load transfer platform system over piled foundations
- ▶ **Basal Reinforcement**
Basetex high-strength geotextiles
- ▶ **TensarTech® Stratum™**
Cellular foundation mattress system for foundations with controlled settlement
- ▶ **Tensar® Erosion Control**
A guide to products and systems