

TenCate Solutions for Subgrade Stabilization



Protective Fabrics
Space Composites
Aerospace Composites
Advanced Armour

Geosynthetics
Industrial Fabrics
Grass

Subgrade Stabilization of Very Soft Soils

When subgrades are supersoft, they can undergo large deformations even under the self weight of the fill material that are placed on top of such subgrades. This is often encountered when subgrades have undrained shear strength of 5 kPa or lower. Examples of such conditions are sludge ponds, fish ponds, estuarial mud flats, etc. Often establishing an initial support platform to allow vehicles and machinery to traverse for normal earthworks and other operations to proceed can be challenging. Significant settlement of the placed fill and adjacent ground heaving will occur under such circumstances. Often special earthwork construction methodology and use of geotextile reinforcement is necessary. The edges of such earthworks also require special detailing for proper anchoring of the geotextile reinforcement. Sometimes it can be in the form of a wide counter weight berm. In extreme cases it may have to extend onto firm ground and trenched in for proper anchoring of the geotextile reinforcement.

Mirafi® HPa geotextile functions as a separator and reinforcing layer to reduce the sinking in of fill material and controlling adjacent mud heaving. The high permeability of **Mirafi® HPa** allows rapid dissipation of excess pore water pressure that develops under loading of the placed fill. **Mirafi® HPa** geotextile is the ideal reinforcement because it has high initial tensile stiffness modulus and high seaming efficiency.

Geogrids are generally not suitable under such supersoft ground conditions for two reasons. Firstly the mud will just squeeze through the large apertures of the geogrid. Secondly, geogrids cannot be sewn together effectively to provide continuity of reinforcement. Overlapping of material, a practice often adopted in normal subgrade stabilisation works, is inadequate under such supersoft ground conditions.



TenCate develops and produces quality products that increase performance, reduce cost, and deliver measurable results by working with our customers to provide advanced solutions.

TenCate Geosynthetics Asia Sdn Bhd (264232-U)
14 Jalan Sementa 27/91 Seksyen 27
40400 Shah Alam
Selangor Darul Ehsan
Malaysia
Tel: +60 3 5192 8568
Fax: +60 3 5192 8575
Email: info.asia@tencate.com

TenCate Geosynthetics North America
365 South Holland Drive
Pendergrass
Georgia 30567
United States of America
Tel: +1 706 693 2226
Fax: +1 706 693 4400
Email: marketing.info@tencate.com

TenCate Geosynthetics Netherlands bv
Hoge Dijkje 2
P.O. Box 9
7440 AA Nijverdal
The Netherlands
Tel: +31 546 544475
Fax: +31 546 544490
Email: geotube@tencate.com

www.tencategeosynthetics.com



TenCate Mirafi® is registered trademark of Royal Ten Cate. This information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from use of such information nor do we offer any warranty or immunity against patent infringement.

© 2013 TenCate Geosynthetics Asia Sdn. Bhd. All Rights Reserved.