

## Geotextile Filter Separator

Traditionally a sub-ballast and/or a graded-sand blanket layer has been used in rail trackbed applications to prevent the upward movement of fine sub-grade particles, whilst allowing effective drainage and dissipation of pore water pressure.

TERRAM Hydrotex® now offers this solution in one geocomposite. TERRAM Hydrotex® is a geocomposite solution, for fine soil trackbed stability applications, that acts as a filter/separator, removing the need for a sand blanket.

TERRAM Hydrotex® is a nonwoven geocomposite consisting of a central filter media thermally bonded to two opposing robust needlepunched geotextile filter layers, to create a geocomposite with sufficient strength and protection to be durable to the abrasion and point loading of ballast.

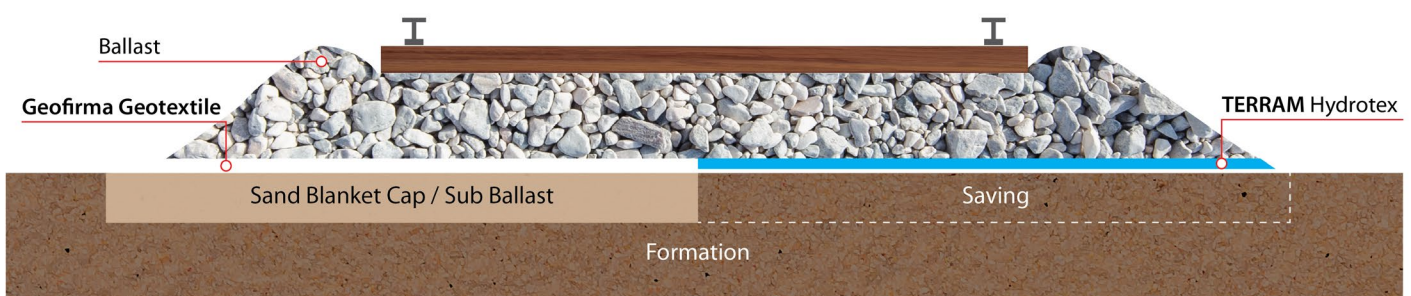
TERRAM Hydrotex® is strong but flexible allowing the composite to conform to the excavated formation, so that no voids exist below the filter media for the development of pockets of slurry resulting in an

## Features

- Prevents upwards particle passage smaller than 0.002mm
- Permeable filter, allowing upward and downward water transmission
- Replaces the requirement for a sand blanket
- Quickly and easily installed, no specialist plant is required
- Functions under ballast without any reduction in performance
- Approved by Network Rail UK
- Residual slurry becomes desiccated as any pore water is dissipated
- Supplied on standard rolls of 3.9m x 25m (other sizes available on request)

## Environmental Benefits

TERRAM Hydrotex® composite reduces the depth of excavation that would be required with a sand blanket. The result is a decrease in the amount of spoil being taken away for landfill and a reduction of vehicles required to deliver materials.



Replacing the whole of the sand blanket reduces the excavation that would normally be required to accommodate the sand and the attendant cost for disposing of the spoil.

## Product Data Sheet

| Mechanical Properties (Mean Values)                 |              |       |             |
|-----------------------------------------------------|--------------|-------|-------------|
| Wide-width strip tensile                            |              |       |             |
| Peak strength                                       | EN ISO 10319 | kN/m  | 50          |
| Elongation at peak strength                         |              | %     | 75          |
| CBR puncture resistance at peak strength            | EN ISO 12236 | kN    | 10          |
| Cone drop hole diameter                             | EN 13433     | mm    | <1          |
| Filter properties (Mean values)                     |              |       |             |
| Pore size [1] - ,mean AOS                           | ASTM F315-03 | µm    | <1          |
| Permeability - VI 280 & 0.28m head                  | EN ISO 11058 | l/m²s | 0.03        |
| Durability                                          |              |       |             |
| Weathering - retained strength at 200MJ/m² exposure | EN 12224     | %     | >90         |
| Microbiological resistance - Retained strength      | EN 12225     | %     | No loss [2] |
| Resistance to acids & alkalis - Retained strength   | EN 14030     | %     | No loss [2] |
| Oxidation - retained strength at 85 days            | EN 12225     | %     | >90         |
| Roll Dimensions                                     |              |       |             |
| Roll width                                          |              | m     | 3.9         |
| Roll length                                         |              | m     | 25          |

1. ASTM F315-03 has been used as an alternative to ISO 12956 to allow for accurate measurement of a micro-porous nonwoven  
 2. No loss identifiable as a result of exposure - sample variation could still result in a variable loss

