GEOfabrics®

TrackTex™

Anti-Pumping Geocomposite

EDS031 ASTM-2021-09-27

1. Description

TrackTex is a multilayer geocomposite consisting of a specialist micro-porous filter sandwiched between two thick nonwoven geotextile protectors.

2. Applications

When deployed at the base of ballast, TrackTex prevents rainwater penetrating through to the underlying formation but allows upward movement of water whilst filtering any fine soil particles. TrackTex is an effective treatment for the repair and prevention of areas of trackbed suffering from severe subgrade erosion as a result of pumping failure.

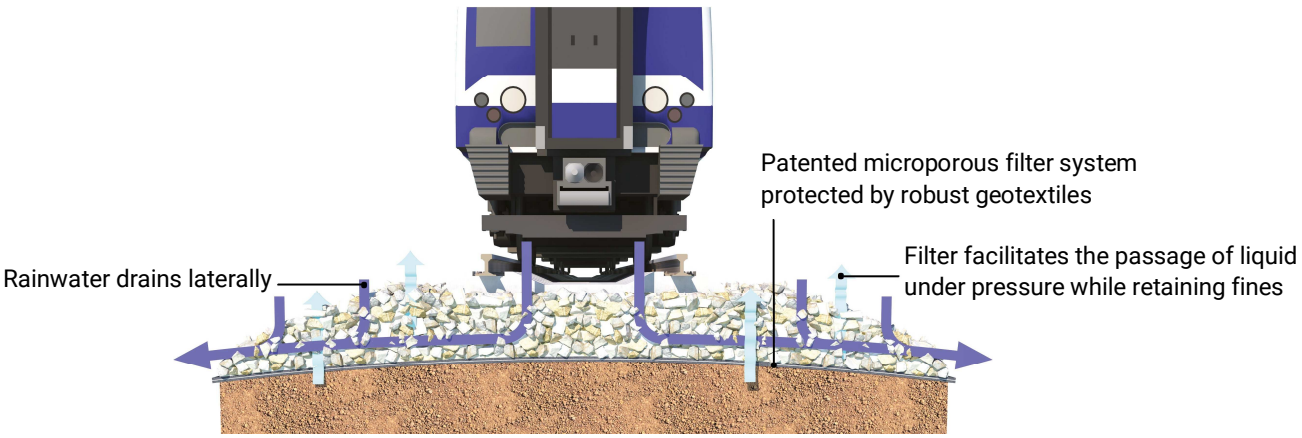
3. Features

- Pore water is relieved upwards through the composite under the cyclic loading
- Rainfall cannot penetrate the microporous filter and it is drained laterally to the sides of the track
- Any residual slurry becomes dry when pore water is dissipated
- Conforms to surface depressions in the formation preventing slurry pockets
- Easy and fast installation helps optimise track maintenance possession time
- No requirement for specialist equipment
- Geogrids can be placed immediately on top of the composite
- The compact 3.9m x 25m rolls make difficult-to-access tracks easier to manage (3.7 and 5.5m wide also available)

	Test Standard	Unit	Mean Values
4. Mechanical Properties			
Static puncture (CBR)	ASTM D6241	lbf	3820
Tensile strength (MD/CMD)	ASTM D4595	lbf/ft	6170
Tensile elongation (MD/CMD)		%	80
5. Filter Properties			
Apparent opening size	ASTM F316	µm	<10
Water permeability	ASTM D4491	gal/(yd^2·s)	0
6. Physical Properties			
Thickness @ 2kPa (Nominal)	ASTM D5199	mils	350
Carbon black content			1% active carbon black
Standard colour			Black
Polymer			100% virgin polypropylene

a) Mean values indicate the arithmetic mean derived from the samples taken for any one test as defined in the standard – usually an overall mean of five samples. Mean values are subject to tolerances based on 95% confidence limits as published on the product CE declaration of performance.
b) Nominal thickness values indicate an average manufacturing norm and not a controlled performance parameter.
c) MD: Machine Direction (longitudinal to the roll). CMD: Cross Machine Direction (across the roll).

	Test Standard	Values
7. Durability		
Deterioration of geotextiles by exposure to light, moisture and heat	ASTM D4355	>70% Retained Strength
Resistance to acids & alkalis	ASTM D5322	>95% Retained Strength
Resistance to abrasion under ballast		TrackTex has been subjected to a loading cycle equivalent to 140 million gross tonnes of main line traffic below 0.3m of ballast in a full-scale testing facility measuring over 8m^2. At the end of the test, there were no visible signs of damage to the composite.



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8. Needle Detection

During manufacture, the protection geotextile passes close to three sets of magnets which remove metal particles up to 0.42 ounces and >0.08 inches. Just before the roll up, the geotextile passes through an electronic metal detection field. Audio and visual alarms indicate if metal particles are detected. Rolls are sent to stock if they pass through the field without an alarm event, otherwise the operator inspects the suspect area, locates any metal particles, and removes them. If unsuccessful, or if any doubt remains as to the presence of metal particles, then the roll goes to the re-inspection facility.

9. Testing

All materials are tested every 7176 yd^2 in our UKAS accredited testing laboratory (No. 1773) to all mechanical properties prior to release.

10. Storage

The geotextiles are supplied in packaging designed to protect the product from damage during handling, storage, and degradation as a result of UV exposure. The product should be kept in appropriate packaging until such time that it is required for installation. The product is clearly and indelibly marked with its name along the edge of the roll at regular intervals, no greater than 5.47 yd. The packaging is clearly labelled to identify the product supplied, in accordance with EN ISO 10320: Geotextile and Geotextile related products – Identification on site. Use slings where provided. Product weights are given on roll tickets. Use equipment appropriate to weight and dimensions. Store and handle in accordance with good occupational health and safety practice.

	Unit	Values		
11. Dimensions				
Standard roll lengths	ft	82 & 164		
Standard roll widths	ft	12.1	12.8	18

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