

- 1. Description** Tracktex is a multilayer geocomposite consisting of a specialist micro-porous filter sandwiched between two thick nonwoven geotextile protectors.
- 2. Application** When deployed at the base of ballast, Tracktex prevents rain water 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 sever subgrade erosion as a result of pumping failure.
- 3. Features**
- Pore water is relieved upwards through the composite under cyclic loading
 - Rainfall cannot penetrate the micro-porous filter and it is drained laterally to the sides of the track
 - Any residual slurry consolidates as pore water is dissipated
 - Conforms to surface depressions in the formation, preventing slurry pockets
 - Faster installation rates can be used to reduce the likelihood of overruns or increase the coverage for a given possession time
 - No requirements for specialist plant
 - Geogrids can be placed immediately on top of the composite
 - The compact 25m & 50m long rolls (3.5m & 3.9m wide) make difficult-to-access tracks an easier proposition to manage



	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			
Opening size	ASTM F316	µm	<10
Water permeability v_{H50}	ASTM D4491	gal/(yd ² -s)	0
6. Physical Properties			
Thickness @ 2kPa (Nominal)	ASTM D5199	mils	330
Carbon black content			1% active carbon black
Standard color			Black
Polymer			100% virgin polypropylene

Notes:

- 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.
- b) Nominal Value (indicates an average manufacturing norm and not a controlled performance parameter).
- c) MD: Machine Direction (longitudinal to the roll).
- d) CMD: Cross Machine Direction (across the roll).
- e) Tensile testing is performed using extensometers.

	Test Standard	Values
7. Durability		
Deterioration of geotextiles by exposure to light, moisture and heat	ASTM D4355	>70% Retained Strength
Resistance to liquids – Acids & Alkalis	ASTM D5322	>95% Retained Strength
Resistance to abrasion under ballast		Tracktex has been subjected to a loading cycle equivalent to 155 million gross tonnes of main line traffic below 0.3m of ballast in a full-scale testing facility measuring over 8m ² . Upon test completion there were no visible signs of damage to the composite.

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 or, in the case of an alarm event, 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 yd² in an UKAS accredited ISO 17025 laboratory to all mechanical properties prior to release.

10. Storage

The geocomposites 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 the product name along the edge of the roll at regular intervals no greater than 5.47 yd. The packaging is labelled clearly 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 dimension. Store and handle in accordance with good occupational hygiene and safety practice.

	Unit	Values
11. Dimensions		
Standard roll length	ft	82
Standard roll width	ft	12.8

