

# Tracktex Formation Treatment

- 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 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 micro-porous filter and is drained laterally to the sides of the track
  - Any residual slurry becomes desiccated as any pore water is dissipated
  - Conforms to surface depressions in the formation preventing the formation of slurry pockets
  - Faster installation rates can be used to reduce the likelihood of overruns or increase the coverage for a given possession time
  - No requirement for specialist plant
  - Geogrids can be placed immediately on top of the composite
  - The compact 25m & 50m long rolls (3.5m & 3.9m wide) mean that difficult-to-access track becomes an easier proposition to manage



	Test	Unit	MEAN VALUES
<b>4. MECHANICAL PROPERTIES</b>			
Static puncture (CBR)	EN ISO 12236	kN	17
Tensile strength (MD/CMD)	EN ISO 10319	kN/m	90
Tensile elongation (MD/CMD)		%	80
Cone drop	EN ISO 13433	mm	0
<b>5. FILTER PROPERTIES</b>			
Apparent opening size	ASTM F316-03	µm	<10
Water permeability $v_{H50}$	EN ISO 11058	l/(m <sup>2</sup> ·s)	0
<b>6. PHYSICAL PROPERTIES</b>			
Thickness @ 2kPa (Nominal)	EN ISO 9863-1	mm	8.5
Carbon black content (Protector)			1% active carbon black
Standard colour			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. Mean values are subject to tolerances based on 95% confidence limits as published on the product CE declaration of performance.
- 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	VALUES
<b>7. DURABILITY</b>		
Weathering 50 MJ/m <sup>2</sup> (1 month)	EN ISO 12224	>90% Retained Strength
Microbiological resistance	EN ISO 12225	No loss in strength
Resistance to acids & alkalis	EN ISO 14030	No loss in strength
Oxidation at 112 days (100 years)	EN ISO 13438	>90% 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 <sup>2</sup> . Upon completion of the test 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 12g and >2mm. 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 6000m<sup>2</sup> 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 5m. 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
<b>11. DIMENSIONS</b>		
Standard roll length	m	25
Standard roll width	m	3.9

