

Generic Specification For Natural Turf With Mesh Element Stabilised Rootzone

Item: Natural turf with mesh element rootzone (such as Netlon Advanced Turf).

This shall comprise a compacted layer of pre-blended rootzone material, which is a mixture of sand / soil / organic material and stabilising mesh elements at an inclusion rate of 5.45kg/m³. With a 15mm layer of identical rootzone topping without mesh elements plus establishment fertiliser and seed or washed turf of amenity type grass mix (unless other mix specifically required).

Note 1: *The compacted rootzone thickness to be determined by the specific application and through consultation with the supplier.*

Note 2: *The 15mm thick layer of topping is not required with a washed turf finish unless it has a sports application.*

The grass type shall consist of a mix of

Advice on grass cultivar mixtures is available from the rootzone supplier.

The mesh elements shall have the following properties:

Polymer	Polypropylene homopolymer
Density	0.905 - 0.908g/cm ³
Element size	100mm x 50mm
Mesh pitch	10mm + 2mm - 1mm
Tensile strength	3.3kN/m width (both longitudinal and transverse directions)
Junction strength	Not less than 50% of the mesh strand strength
Flexural recovery	The mesh shall have high flexural recovery, not less than 95%

The mesh stabilised rootzone shall have the following properties at 40cm tension:

Saturated conductivity	50 - 120mm/hr
Total porosity	30 - 50%
Air filled porosity	20 - 30%
Capillary porosity	10 - 25%
Organic matter content	0.7 - 3% (LOI)
pH	5.5 - 7.5

The system shall be installed in accordance with the supplier's guidance.

Note to specifier:

This specification does not include provision of materials below the mesh stabilised Rootzone or the maintenance and aftercare of the turf. These must be specified separately. Advice can be obtained from the supplier.

Summary of Test Methods

1. Tensile strength

Five samples are taken from the uncut net in both the longitudinal and transverse directions. Each sample to be five strands wide and long enough to allow a gauge length of 100mm. Cross-head speed 200mm/min. The minimum tensile strength for any one sample shall be 165N with a minimum average for five samples of 170N.

2. Junction strength

Two perpendicular strands are cut from the net so that they are attached to each other by one junction.

The two strands are bent and clamped so that their ends are at 180° to each other. With a cross head speed of 200mm/min the strands are pulled apart until the junction fails.

The junction strength should be at least 50% of the average tensile strength for a strand, i.e. 17N

3. Flexural recovery

Of a 100mm long Mesh element, 60mm of length are clamped adjacent to an edge having a radius of 3mm, so that 40mm projects out over this edge. (Discard the sample if the tip droops by more than 3° along the chord of the droop).

Fold the sample 90° down over the edge, hold for five seconds, release, and after a further five seconds measure the angle to which it has reverted (along the chord). For 90% of samples, 90° minus the reverted angle should be at least 95% of 90° minus the original droop angle.

4. Properties of mesh stabilised rootzone

These should be performed according to the USGA protocol. The acceptable ranges are not necessarily those of the USGA but will vary with application and should be discussed with Netlon Limited or the Distributor.

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