

GREENAX® Slope Protection Mesh with Erosion Mat

GREENAX is a flexible slope facing designed to contour with the surface of slopes. The product comprises of Deltax mesh with an integrated monofilament erosion mat. It is able to provide a high strength facing together with erosion control. The high stiffness (limited strain) of Greenax enables greater restraint at the face, *resulting in less displacement*. It is designed for use with soil nails as a slope protection mesh or as a high strength erosion mat in gullies or run-off areas.

GREENAX slope protection mesh offers the following benefits:

- ❖ **Superior Strain Stiffness:** 6% as compared to 12% (Hex Meshes). *Tensile forces are distributed across the face*, as opposed to the mesh deforming.
- ❖ **Olive Green Colour:** Colour blends with the surrounding vegetation.
- ❖ **Durability:** Ultracoat protection coating offers superior durability to Galvan coatings as well as providing greater lifespans than PVC coated meshes.
- ❖ **Speed of Installation:** Installation rates up to twice as fast as conventional Hex Meshes, without roll-back. Ideal for limited working schedules and rail possessions.



T3 mesh clips used to join edge seams on Greenax



Greenax mesh contoured on slope face, with profiling bolts



Greenax slope protection mesh, laid below catch fence



Re-establishment of vegetation growth through Greenax

GREENAX - Technical Data

Roll Size	3.9 x 30m, 117 m ²
Roll Weight	123 kg
Mesh Aperture (internal)	170 mm (h) x 92 mm (w) (+/- 3%)
Internal Diameter of Mesh (PCD)	82 mm
Height, Mesh + Erosion Mat (flat)	12-14 mm
Thickness of Monofilament	0.6 mm Polypropylene

Mesh Strength	53 kN/m (width)
E Value	800 kPa
Wire Angle (at bend)	53°
Wire Ø	2 mm
Wire Strength (Ultimate)	1770 N/mm ²
Void Ratio of Erosion Mat	> 90%

Punching Shear Comparison:

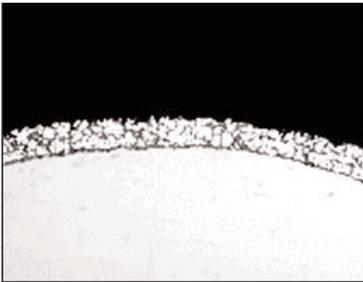
Plate Size	Hex Mesh 60/80 (2.2 mm wire)	Hex Mesh 80/100 (2.7 mm wire)	Hex Mesh 80/100 (3 mm wire)	GREENAX Mesh 100/180 (2 mm wire)
150 x 150 mm	19.2 kN	14.5 kN	18 kN	25.7 kN
200 x 200 mm	21.2 kN	29 kN	36 kN	39 kN
250 x 250 mm	28.8 kN	33 kN	40 kN	51 kN
300 x 300 mm	36 kN	40 kN	49 kN	64 kN
350 x 350 mm	41.8 kN	51 kN	63 kN	77 kN

Punching Shear Calculation - This calculation is dependent on the plate size, i.e. the number of wires within the mesh that are bisected by the plate edges.

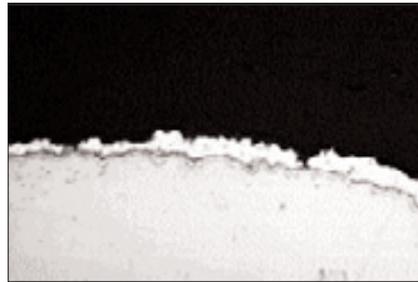
Wire Strength and Mesh Strength:

	Hex Mesh 60/80 (2.2 mm wire)	Hex Mesh 80/100 (2.7 mm wire)	Hex Mesh 80/100 (3 mm wire)	GREENAX Mesh (2 mm wire)
Wire Grade (ultimate)	550 N/mm ²	550 N/mm ²	550 N/mm ²	1770 N/mm ²
Tensile Strength (wire)	2.2 kN	2.7 kN	3.9 kN	5.6 kN
Shear Strength (wire)	1.2 kN	1.8 kN	2.2 kN	3.2 kN
Tensile Strength (mesh / m width)	37 kN	50 kN	-	53 kN

Corrosion Protection: GREENAX mesh is supplied with Ultracoat Protection (Galvanizing with Aluminium and additional corrosion inhibitor) applied to wire prior to drawing. Following drawing, the coating is further consolidated on the wire by re-drawing (see L/H image below), offering additional abrasion resistance and increased corrosion protection.



Zinc and Aluminium coated wire (GREENAX)



Zinc coated wire (typically Hex meshes)

Lifespan of GREENAX with Ultracoating: 60+ years, depending on aggressivity levels in accordance with EN ISO 12944-2 and EN 12500, see Data Sheet D.301

PVC coatings are not used, due to their poor abrasion resistance and durability, reduced corrosion protection and limited adhesion to the wire. They are easily damaged by bearing plates, tensioned border ropes and rocks or debris. See Data Sheet D.302

Unravelling resistance of GREENAX: Unravelling is the effect on the mesh where one wire is cut. For GREENAX, this effect is limited to a width of two chainlinks, due to the stiffness of bend at each link. Also unravelling remains localised around a circle on GREENAX, whereas Hex meshes tend to tear.

Erosion Control: The polypropylene monofilament mat, integrated with DELTAX mesh, provides an effective barrier against erosion. The polypropylene is UV stabilised to ensure durability. Mass of erosion mat = 400 g/m². GREENAX can be used for slope protection in conjunction with soil nails, or separately as a reinforced erosion mat in water run-off areas or flood gullies, where it should be secured with "J" pins.

Mesh Clips:



T3 Mesh Connection Clip (Ø4mm, 40mm link)



T2 Border Rope Press Link (Ø6mm, 14mm throat x 40mm)

Mesh Pins:



J Pin (Y12 L = 750, 50mm open loop), Galvanized

CE Greenax ETA Approval
Certificate No. 1301-CPD-0818

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