MACCAFERRI

TECHNICAL DATA SHEET

Rev: 01 Issue Date June 2015

GREEN TERRAMESH

GALFAN & PVC COATED

Green Terramesh® is an environmentally friendly modular system used for reinforced soil embankments. Green Terramesh® units are made of double twisted wire, a biodegradable erosion control blanket, a welded mesh panel, and two pre-formed steel brackets (Fig. 1). The Green Terramesh® main unit is fabricated from soft tensile, Galfan and PVC coated steel wire. The facing section of the unit is reinforced with additional PVC coated steel rods inserted through the twists during the manufacturing process (Fig.1). The steel wire mesh used in the Green Terramesh® is according to EN 10223-3 (Fig. 2). The facing retains the backfill and permits a vegetative cover to establish. Attached behind the woven wire mesh is a welded wire mesh panel. Two steel brackets (8mm diameter) are used to form a fixed 70 degree face slope angle. An erosion control blanket made from wool is used to retain the vegetative soil. Green Terramesh® units are supplied in standard lengths, requiring no cuts on site. Dimensions, tolerances, and sizes are shown in Table 1.

Wire

All tests on wire must be performed prior to manufacturing the mesh.

1. **Tensile strength:** the wire used for the manufacture of Green Terramesh shall have a tensile strength between 350-550 kg/mm2 exceeding, in order to increase the tensile resistance of the finished products, what is suggested from EN 10223-3. Wire tolerances (Tab. 3) are in accordance with EN 10218 (Class T1).
2. **Elongation:** Elongation shall not be less than 10%, excee-ding, in order to increase the tensile resistance of the fini-shed products, what is suggested from EN 10223-3.
3. **Galfan coating:** minimum quantities of Galfan shown at Tab.3 meet the requirements of EN 10244-2 (Table 2 and Class A).
4. **Adhesion of Galfan:** the adhesion of the Galfan coating to the wire shall be such that, when the wire is wrapped six turns around a mandrel having four times the diameter of the wire, it does not flake or crack when rubbing it with the bare fingers.

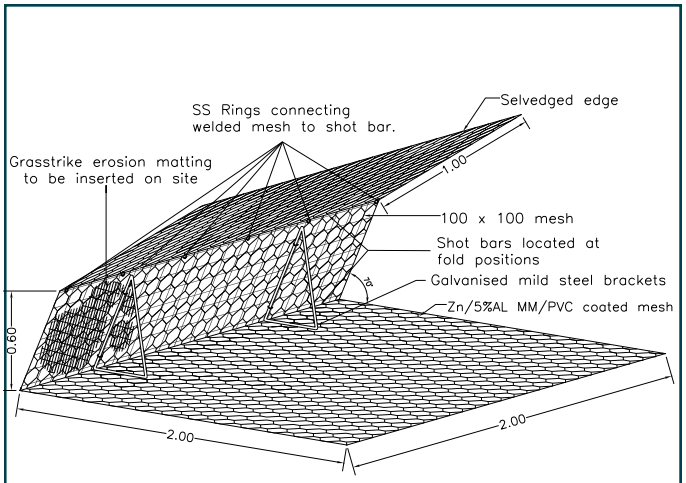


Figure 1

The tolerance on the opening of mesh 'D' being the distance between the axis of two consec-utive twists, is according to EN 10223-3

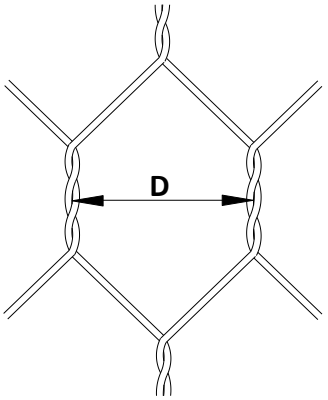


Figure 2

P.V.C. (Polyvinyl Chloride) Coating

The technical characteristics and the resistance of the PVC to ageing meet the relevant standards. The main values for the PVC material, according to EN 10245-2, are as follows:

Colour: grey-RAL 7037, according to ASTM D1482-57T;
Specific gravity: 1.30-1.35 kg/dm3 in accordance with ASTM D792 Table 1;
Hardness: between 50 and 60 Shore D, according to ASTM D 2240;
Tensile strength: not less than 20.6 MPa, according to ASTM D412-92;
Elongation at break: not less than 200%, in accordance with ASTM D412-92;
Weight loss: less than 5%, after 24 hrs at 105°C, test method ASTM D2287-92;
Residual ashes: less than 2%, according to ASTM D2124-62T;
Abrasion resistance: loss in volume shall be less than 0.30 cm3, according to ASTM D1242-92, test method A.

The accelerated ageing tests are:
Salt spray test: test period 1,500 hrs, test method ASTM B117-94;
Exposure to UV rays: test period 2,000 hours at 63°C, test method ASTM D1499-92a and ASTM G23-93 apparatus Type E;
Exposure to high temperatures: 24 hrs at 105°C, ac-cording to ASTM D1203 and ASTM D2287;
Brittleness temperature: Cold-bend less than –30°C test method BS 2782-104A; Cold-flex less than +15°C, test method BS 2782-151A.

The properties after ageing tests shall be as follows:
Appearance of coating: no cracking, stripping or air bubbles, and no appreciable variation in color;
Specific Gravity: variations shall not exceed 6%; Hardness: variations shall not exceed 10%;
Tensile strength and elongation: var. shall not exceed 25%; **Abrasion resistance:** variations shall not exceed 10%;
Brittleness temperature: Cold-bend shall not exceed -20°C.
Cold-flex shall not exceed +18°C.

MACCAFERRI

Maccaferri reserves the right to amend product specifications without notice and specifiers are requested to check as to the validity of the specifications they are using.

1. Table of sizes for Green Terramesh facing units			
L=Length (m)	W=Width (m)	H=Height (m)	Mesh type
2	2	0.6	8 x 10

All sizes and dimensions are nominal.
Tolerances of ± 3% of the width and ± 2.5cm on the height, of the Green Terramesh shall be permitted.

2. Standard Mesh-Wire				
Type	D (mm)	Tolerance	Internal Wire Dia (mm)	External Wire Dia (mm)
8x10 Galfan+PVC	80	±16%/-4%	2.20	3.20

3. Standard wire diameters				
		Mesh Wire	SelvedgeWire	Lacing Wire
Internal Wire Diameter	**ø mm**	2.2	3.4	2.2
Wire Tolerance	**(±) ø mm**	0.06	0.06	0.06
Min. Quantity of Galfan	**gr/m²**	230	265	230

Lacing Operations

Lacing operations can be made by using the tools shown in Fig.5. Stainless steel rings having the following specification can be used instead of lacing wire (Fig.4):
Stainless steel rings for PVC coated products
• diameter: 3.05 mm, ASTM A313, Type 302, Class I
• tensile strength: 1530-1745 MPa, ASTM A313-92.
Spacing of the rings must not exceed 200 mm (Fig.3)

Quantity Request

When requesting a quote, please specify:
• size of units (length x width x height, see Fig.1),
• type of mesh,
• type of coating
EXAMPLE: No. 100 Green Terramesh units 2mx2mx0.6m - Mesh type 8x10 - Galfan + PVC coated

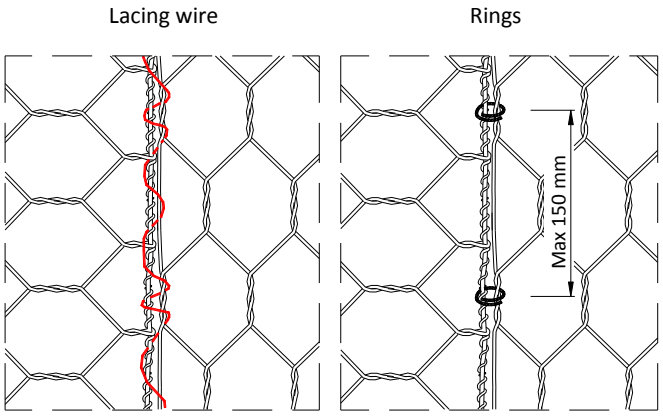


Figure 3

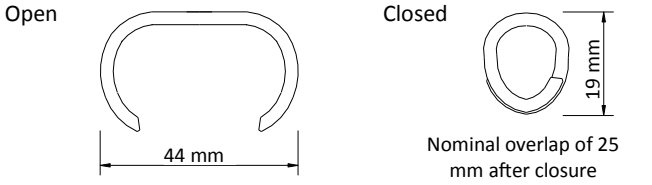
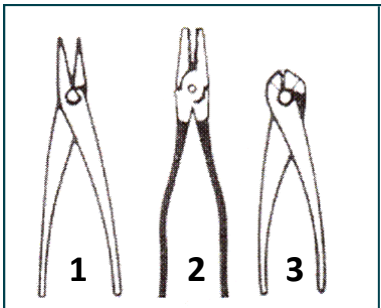


Figure 4



A
1. Pliers
2. Pliers with nipper
3. Nipper

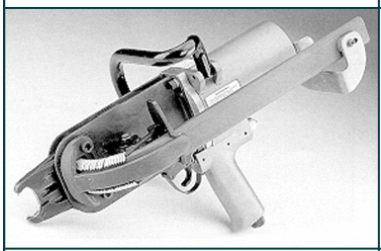

B
Pneumatic Spenax tool

Figure 5

Geofabrics New Zealand Ltd
14 Goodman Place, PO Box 12536, Penrose, Auckland, New Zealand
T: (+64) 9 6436495 F: (+64) 9 634 6492, FREEPHONE 0800 60 60 20
E: sales@geofabrics.co.nz
www.geofabrics.co.nz