

TERRAMESH GALFAN & PVC COATED

The Terramesh® System is a modular system used for soil reinforcement applications such as mechanically stabilized earth walls and slopes. Terramesh® System is fabricated soft tensile, heavy Galfan (Zn-5%Al-MM alloy) and PVC coated double twisted steel wire mesh (Fig. 1). The wire mesh used to manufacture the Terramesh® System is in accordance with ASTM A975-97 (Fig. 2).

The gabion facing section of the unit is formed by connecting the back panel and a diaphragm to the main unit. This creates rectangular shaped cells used for stone confinement.

Terramesh® System units are supplied in standard gabion facing sizes of 2 x 1 x 1 and 2 x 1 x 0.5 with lengths as shown in table 1 to correspond to design requirements.

Dimensions, tolerances and sizes are shown in Tab.2.

Wire

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

- Tensile strength:** the wire used for the manufacture of gabions shall have a tensile strength between 372-470 according to ASTM A641-97. Wire tolerances (Table 3) are in accordance with ASTM A641-97.
- Elongation:** Elongation shall not be less than 12%, in accordance with ASTM A370-97. Test must be carried out on a sample at least 12 in. (30 cm) long.
- Galfan coating:** All wire shall comply with the requirements of ASTM A975-97, style 3 coating, Galfan and PVC coated steel wire.
- Adhesion of Galfan:** the adhesion of the zinc 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, in accordance with ASTM A856.

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 are as follows:

- 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;
- Modulus of elasticity:** not less than 18.6 MPa, in accordance with ASTM D412-92;
- Abrasion resistance:** the percentage of the weight loss shall be less than 12%, according to ASTM D1242-92.
- Creeping corrosion:** max. penetration of corrosion of the wire from a square cut end shall be 1 in. (25 mm) when the specimen has been immersed for 2,000 hours in a 5% solution HCl (hydrochloric acid 12 Be).

Fig.1
A = Diaphragm made with double twisted hexagonal mesh
B = Main Terramesh® System unit of double twisted hexagonal

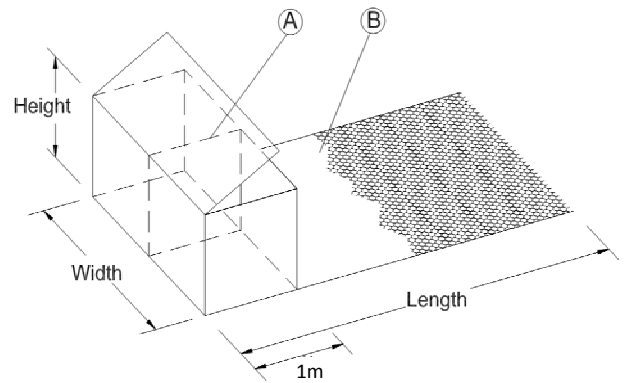


Figure 1

The tolerance on the opening of mesh 'D' being the distance between the axis of two consecutive twists, is according to ASTM A975-97

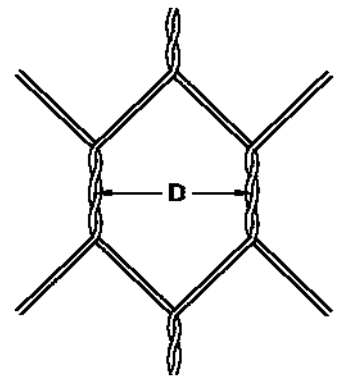


Figure 2

The accelerated ageing tests are:

Salt spray test: test period 3,000 hours, test method ASTM B117-94;

Exposure to UV rays: test period 3,000 hours at 145°F (63°C), test method ASTM D1499-92a and ASTM G23-93 apparatus Type E;

Brittleness temperature: no higher than 15°F (-9°C), or lower temperature when specified by the purchaser, when tested in accordance with ASTM D746.

The properties after ageing tests shall be as follows:

Appearance of coated mesh: 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: variations shall not exceed 25%;

Modulus of elasticity: variations shall not exceed 25%;

Abrasion resistance: variations shall not exceed 10%;

Brittleness temperature: shall not exceed +64°F (+18°C). E;

1. Table of sizes for Terramesh reinforcement

Length (L)	Width (W)
4	2
6	2
50	2

All sizes and dimensions are nominal.

(Table 1) Tolerances of $\pm 5\%$ of the width, height, and length of the gabions/Terramesh shall be permitted.

2. Standard Mesh-Wire

Type	D (mm)	Tolerance	Internal Wire Dia (mm)	External Wire Dia (mm)
8x10/ Galfan+PVC	83	$\pm 10\%$	2.70	3.70

3

		Lacing Wire	Mesh Wire	Selvedge Wire
PVC Mesh Diameter	\emptyset mm	2.20/3.20	2.70/3.70	3.40/4.40
Wire Tolerance	(\pm) \emptyset mm	0.10	0.10	0.10
Minimum Quantity of Zinc	gr/m ²	220	230	260

Lacing and Filling

Lacing operations can be made by using the tools shown in Fig.5.

Quantity Request

When requesting a quote, please specify:

- size of units (length x width, see Table1),
- type of mesh,
- EXAMPLE: No. 100 gabions 2x1x1m - Mesh type 8x10 - Wire diam. 2.7 mm - PVC coated & 100 Terramesh panel 4 x 2m - Mesh type 8x10 - Wire diam. 2.7 mm - PVC coated

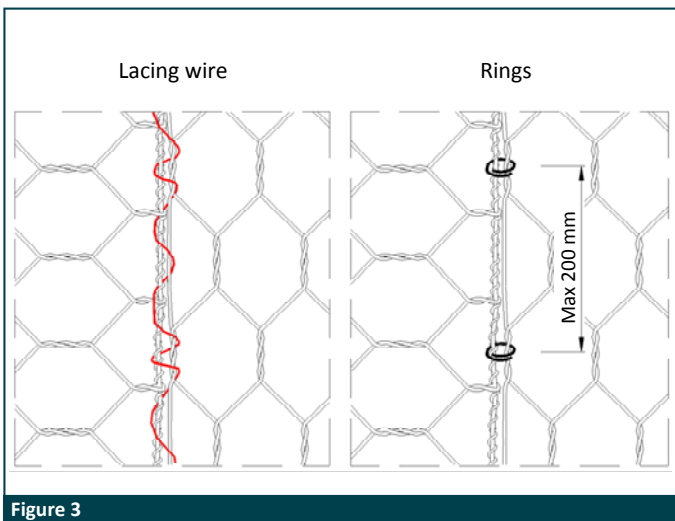


Figure 3

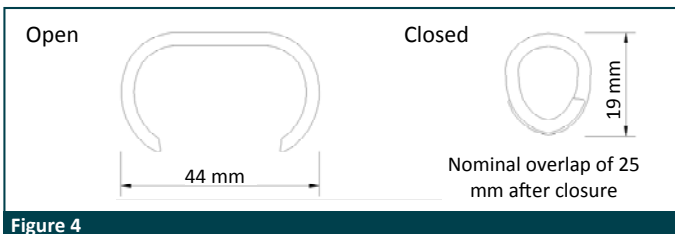


Figure 4

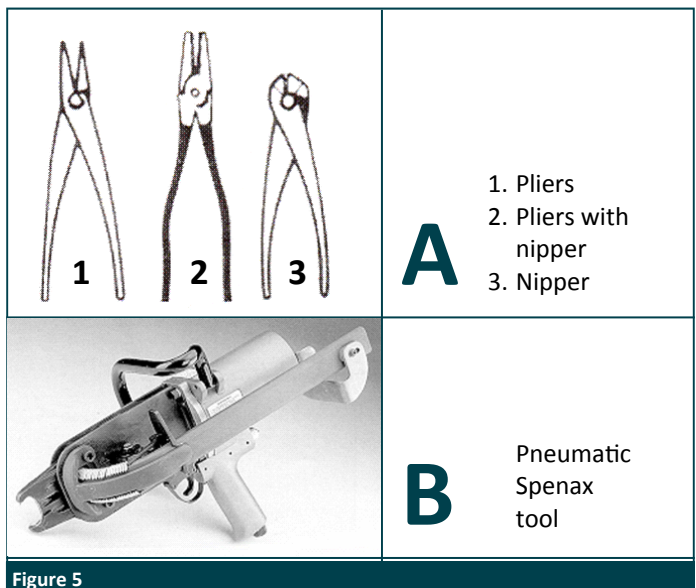


Figure 5

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