

TERRAMESH® SYSTEM GALFAN & POLYMER 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, heavily 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 EN 10223-3 (Fig. 2).

The 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 lengths, requiring no cuts on site.

Dimensions, tolerances and sizes are shown in Tab. 1.

Wire

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

- Tensile strength:** the wire used for the manufacture of terramesh shall have a tensile strength between 350-500 N/mm² according to EN 10223-3. Wire tolerances (Table 3) are in accordance with EN 10218 (Class T1).
- Elongation:** Elongation shall not be less than 10%, in accordance with EN 10223-3. Test must be carried out on a sample at least 25 cm long.
- Galfan coating:** minimum quantities of Galfan shown at Table 3 meet the requirements of EN 10244-2 (Table 2 and Class A).
- 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.

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.

- A =** Diaphragm made with double twisted hexagonal mesh
- B =** Main Terramesh® System unit of double twisted hexagonal mesh

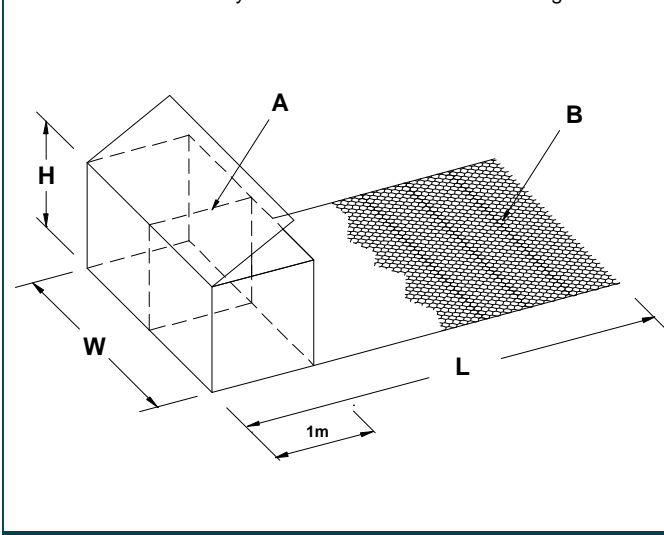


Figure 1

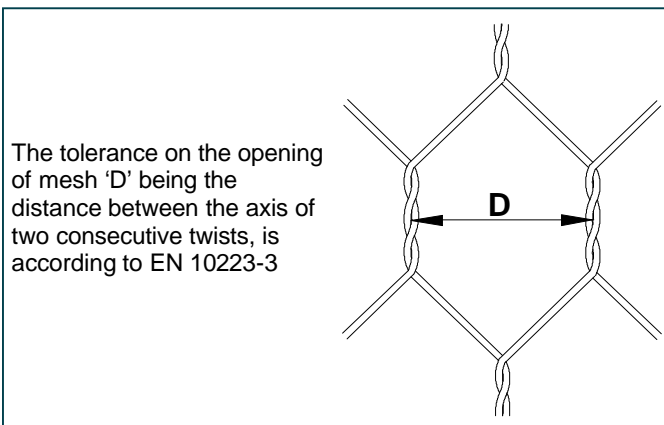


Figure 2

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, according 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.

L=Length (m)	W=Width (m)	H=Height (m)
3	2	0.5
4	2	0.5
5	2	0.5
6	2	0.5
3	2	1
4	2	1
5	2	1
6	2	1

All sizes and dimensions are nominal. Tolerances of ± 5% of the width, height, and length of the Terramesh shall be permitted.

Type	D (mm)	Tolerance	Internal Wire Dia (mm)	External Wire Dia (mm)
8x10	80	+16% / -4%	2.70	3.70

	Mesh Wire	Selvedge Wire
Internal Wire Diameter	ø mm	Int.2.7/Ext.3.7
Wire Tolerance	(±) ø mm	0.06
Min. Q.ty of Galfan	gr/m ²	245

Lacing Operations

Lacing operations can be made by using the tools shown in Fig.5. Galfan coated steel rings having the following specification can be used instead of lacing wire (Figs. 3, 4):

- diameter: 3.00 mm
- tensile strength: 170 kg/mm²

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 Terramesh® System 4x2x1m - Mesh type 8x10 - Wire diam. 2.7 mm - Galfan + PVC coated

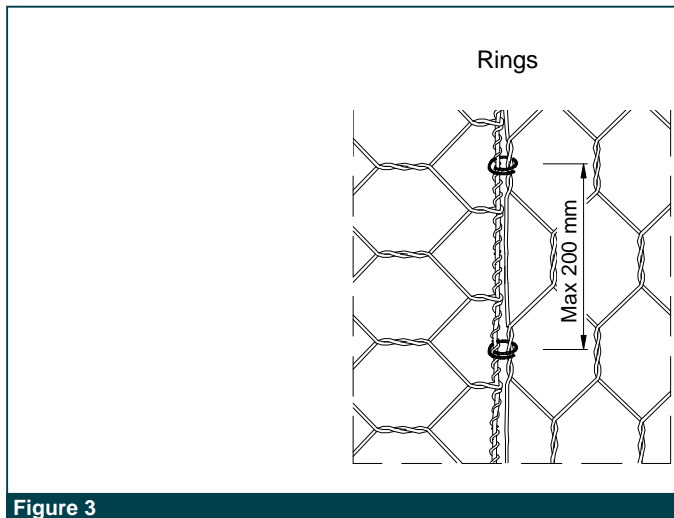


Figure 3

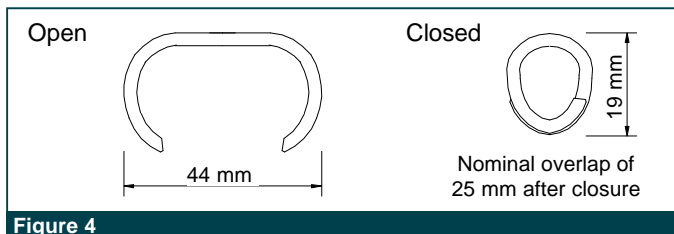


Figure 4

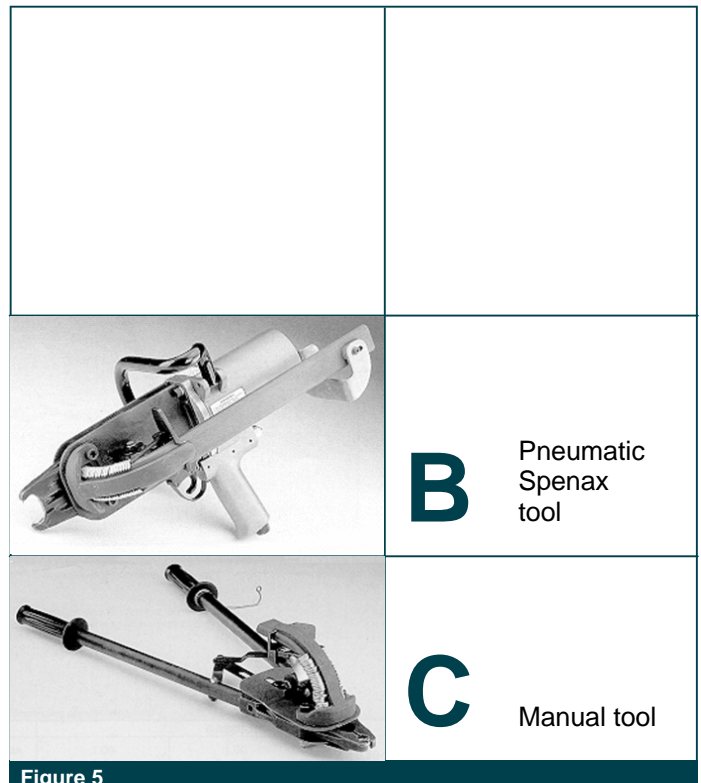


Figure 5

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