

ROCKFALL PROTECTION NETTING

GALMAC & POLYMER COATED

Steel woven wire mesh netting is used as a drapery system to prevent rocks and debris from falling onto roads and railways. The mesh consists of Galmac coated double twisted steel woven wire with mechanical characteristics higher than the ones suggested in EN10223-3. The steel wire used in the manufacture of the mesh is heavily galvanized with Galmac, a Zn-5%Al alloy.

Due to the characteristics of the double twist, the steel wire mesh can withstand the force of the falling rocks without unraveling in the event of wire breakage.

The nominal tensile strength of the mesh shall be as per Table 2; test done in compliance with EN 15381, Annex D.

The standard specifications for the wire-mesh are shown in Tables 2, 3, 4.

Wire

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

- Tensile strength:** the wire used for the manufacture of rockfall protection shall have a tensile strength between 380-550 N/mm² exceeding, in order to increase the tensile resistance of the finished products, as suggested in EN 10223-3. Wire tolerances (Table 4) are in accordance with EN10218 (Class T1).
- Elongation:** Elongation shall not be less than 10%, according to EN 10223-3. Test must be carried out on a sample at least 25 cm long.
- Galmac coating:** minimum quantities of Galmac shown at Table 4 meet the requirements of EN 10244-2 (Table 2 and Class A).
- Adhesion of Galmac:** the adhesion of the Galmac 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 EN 10244.
- Outwearing accelerated aging test** in a general condensation of moisture containing sulfur dioxide (28 cycles) according to EN ISO 6988 (without showing signs of red rust).

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:

Specific weight: 1.30-1.35 kg/dm³ according to ISO 1183;

Hardness: between 50 and 60 Shore D, according to ISO 868

Tensile strength: higher than 21N/mm², according to ISO 527

Elongation at break: not less than 200%, in accordance with ISO 527;

Colour: grey-RAL 7037

Resistance to UV radiation: After 4000 hours of exposure to UV light according to ISO 4892-2 or ISO 4892-3, the tensile strength and elongation at break can not be more variable than 25%.

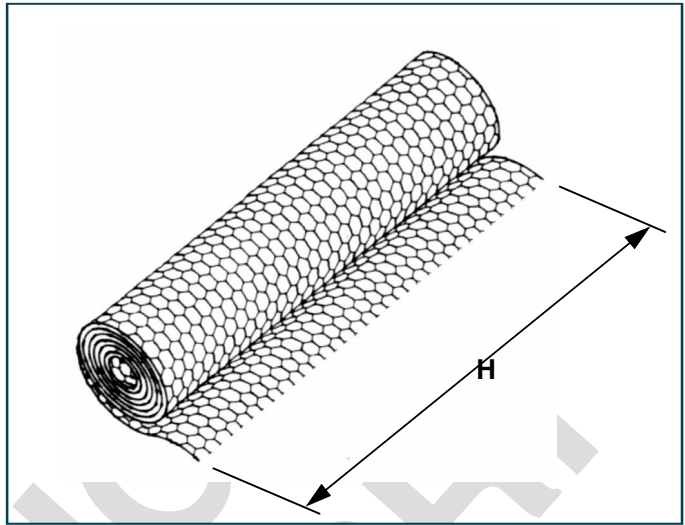


Figure 1

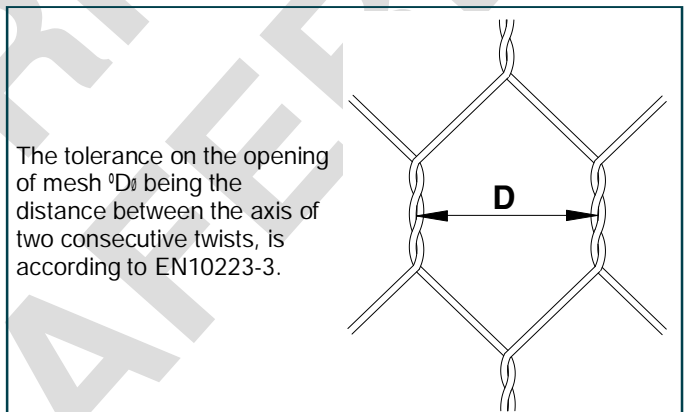


Figure 2



Example of DT Net protection

1. Table of sizes for gabions

L=Length (m)	H=Height (m)
25	2, 3, 4
50	2, 3, 4
100	2, 3, 4

All sizes and dimensions are nominal.
Tolerances of 0/+1m of the length, and ±D of the height shall be permitted.

Lacing Operations

Lacing operations can be made by using the tools shown in Fig.5. Galmac 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 rolls (length x height, see Fig.1),

~ type of mesh,

~ type of coating

EXAMPLE: No.100 rolls Length=25m, Height=4m - Mesh type 8x10 - Wire diam. 2.7/3.7 mm - Galmac & PVC coated

2. Standard Mesh-Wire

Type	D (mm)	Tolerance	∅ Wire (mm)	Mesh Tensile Strength (kN/m)
6x8	60	+16%/-4%	Int.2.2/Ext.3.2	37
8x10	80	+16%/-4%	Int.2.7/Ext.3.7	50

3. Standard Wire Diameters

Type	∅ Lacing Wire (mm)	∅ Mesh Wire (mm)	∅ Selvedge Wire (mm)
6x8	Int.2.2/Ext.3.2	Int.2.2/Ext.3.2	Int.2.7/Ext.3.7
8x10	Int.2.2/Ext.3.2	Int.2.7/Ext.3.7	Int.3.4/Ext.4.4

4. Wire tolerances and coating

Internal Wire diameter	mm	2.2	2.7	3.4
Wire tolerance	(±) ∅ mm	0.06	0.06	0.07
Min.Q.ty of Galmac	gr/m ²	230	245	265

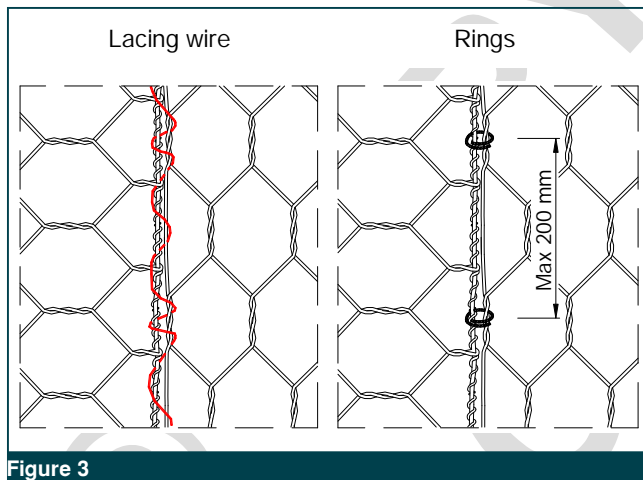


Figure 3

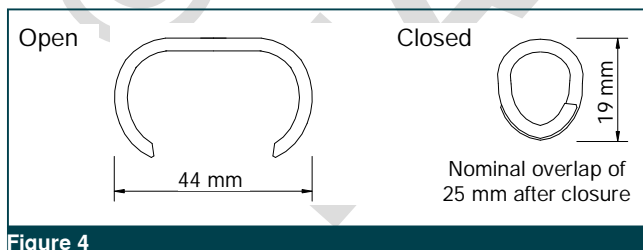


Figure 4

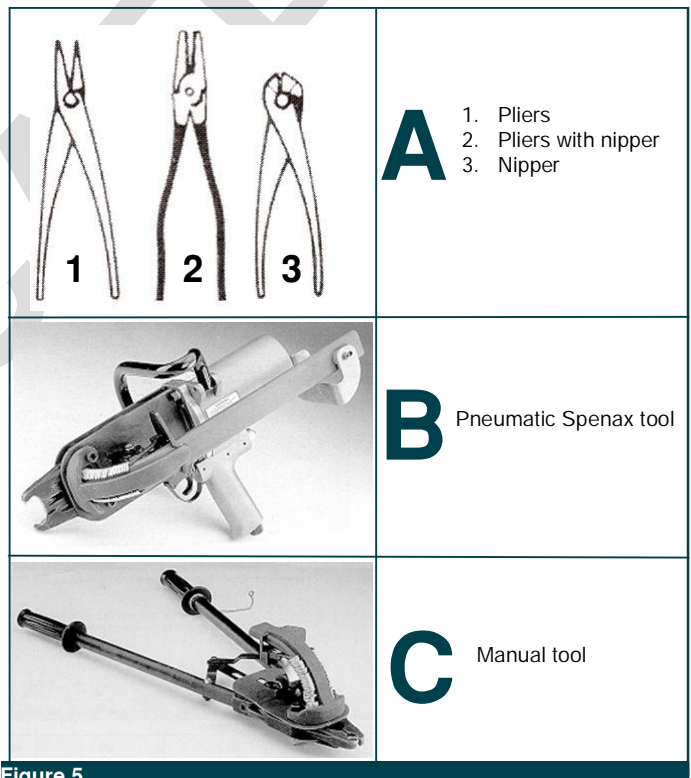


Figure 5

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

- B** Pneumatic Spenax tool

- C** Manual tool

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