MACCAFERRI

TECHNICAL DATA SHEET

Rev. 00, Date 01.10.2018

ROCKFALL PROTECTION NETTING

POLIMAC® COATED

The mesh consists of double twisted GalMac® (Zn-Al 5% alloy) and PoliMac® coated steel woven wire. The mesh is produced in accordance with standard EN10223-3:2013. The management and production system is certified in compliance with standards ISO 9001. Steel woven wire mesh is used as a drapery system to prevent rocks and debris from falling onto roads and railways. Dimensions of the GalMac® and PoliMac® coated net are stated in Table 1. The nominal tensile strength of the mesh shall be as per Table 2; tests carried out in compliance with EN 10223-3:2013. The average punching load capacity of the netting is in compliance with the tests carried out in accordance with UNI 11437. When the mesh is tested at 50% of the nominal tensile strength in accordance with EN 10223-3:2013, the wires will not show cracks in the organic coating within the double twist region.

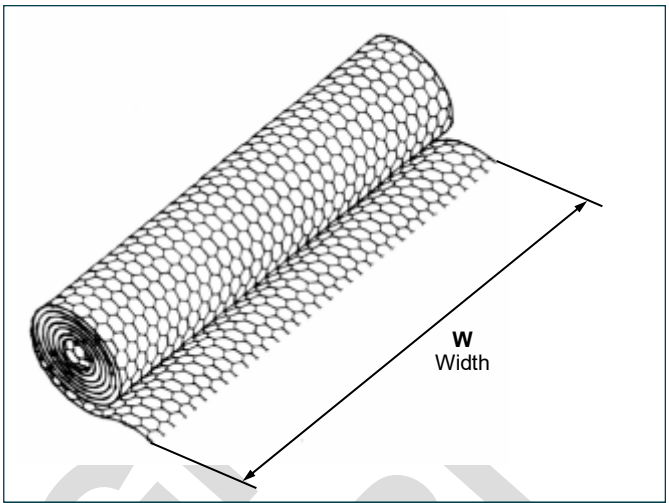

Figure 1

Wire

The steel wire used in the production of the mesh is coated with GalMac® class A (Zn-Al 5% alloy).

A PoliMac® coating with a nominal thickness of 0.50mm is then applied to provide added protection for use in hydraulic works, polluted environments, or wherever the risk of corrosion is present. The standard specifications of the mesh-wire are shown in Tables 2 and 3.

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

1. **Tensile strength:** the wire used for the manufacture of GalMac® coated mesh shall have a tensile strength between 350-550 N/mm^2 as per EN10223-3:2013. Wire tolerances (Table 3) are in accordance with EN10218 (Class T1).
2. **Elongation:** Elongation shall not be less than 8%, as per EN10223-3:2013.
3. **GalMac® coating:** minimum quantities of GalMac® (Table 3) meet the requirements of EN10244-2 (Table 2 - Class A).
4. **Adhesion of GalMac®:** the adhesion of the GalMac® coating to the wire must be in accordance with EN 10244.
5. **Outwearing accelerated aging test** in a general condensation of moisture containing sulfur dioxide (28 cycles) in accordance with EN ISO 6988 the mesh shall not show more than 5% of red rust.

The tolerance on the mesh size 'M' being the distance between the axis of two consecutive twists, is according to EN 10223-3: 2013

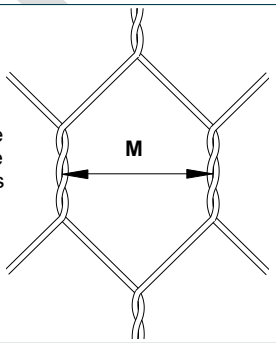

Figure 2

PoliMac® coating

The technical characteristics and the ageing resistance of the PoliMac® coating comply with EN 10245-1.

Colour: grey RAL 7012.

Resistance to UV radiation: the tensile strength and elongation at break of the base compound after 2500 hours of exposure to QUV-A (ISO 4892-3 mode 1) do not change more than 25% from the initial test results.

Chemical resistance: the PoliMac® resist the chemical agents in concentrations that are representative of soil and water normally found in civil works.

Outwearing accelerated ageing test in salt spray: when the PoliMac® coated wire mesh is subjected to the neutral salt spray test (ISO 9227) after 6000 hours of exposure the mesh does not show more than 5% of DBR (Dark Brown Rust).

Resistance to abrasion: the PoliMac® coating does not expose metal wire when tested in accordance with procedure described in par. 4.1.2.1 of EN 60229:2008, after 100,000 cycles with a vertical force of the steel angle of 20N.

Table 1: Sizes for rockfall protection netting	
L=Length (m)	W=Width (m)
25	2, 3, 4
50	2, 3, 4
100	2, 3, 4

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

Table 2: Standard mesh - wire combination					
Type	M (mm)	Tolerance (mm)	Wire diameter (mm)	Nominal Mesh Tensile Strength (kN/m)	Average punching load kN
6x8	60	-0/+8	2.20/3.20	37	42
8x10	80	-0/+10	2.70/3.70	50	67

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 (Figs. 3, 4):

- diameter: 3.00 mm
- tensile strength: >1700 - 1900N

Spacing of the rings must not exceed 200 mm (Fig.3)

Table 3: Standard wire diameter				
		Mesh wire	Selvedge wire	Lacing wire
Internal diameter	ø mm	2.20 2.70	2.70 3.40	2.2
Wire tolerance	(±) ø mm	0.06	0.06 (2.70) 0.07 (3.40)	0.06
Min. quantity of coating	gr/m^2	230 (2.20) 245 (2.70)	245 (2.70) 265 (3.40)	230

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, Width=4m - Mesh type 8x10 - Wire diam. 2.70 mm - GalMac® and PoliMac® coated

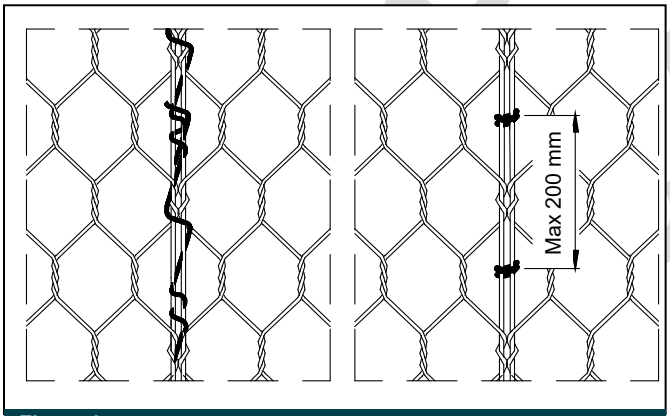

Figure 3:

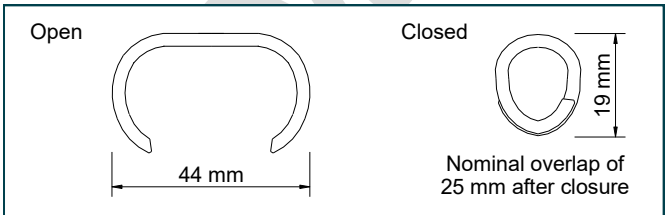

Figure 4

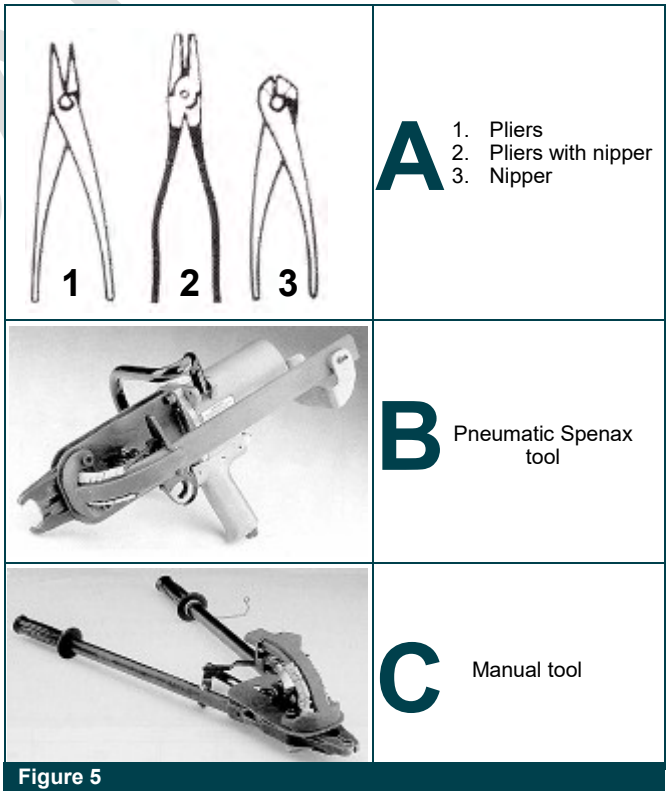

Figure 5

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