MACCAFERRI

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TECHNICAL DATA SHEET
Rev. 15, Date 04.07.2014

GABIONS
GALMAC COATED

Gabions are baskets manufactured of double twisted hexagonal woven steel wire mesh 6x8 or 8x10, produced in compliance with CPR - Construction Product Regulation 305/2011, bearing the CE marking in compliance with ETA-09/0414. The management and production system is certified in compliance with ISO 9001.
Gabions are filled with stones at the building site to form flexible, permeable, monolithic structures such as retaining walls, channel linings and weirs for erosion control projects.
In order to reinforce the structure, all mesh panel edges have selvedge wires, which have a larger diameter than the mesh wires (see table 3). For dimensions and sizes of Galmac coated **Gabions**, please see table 1.

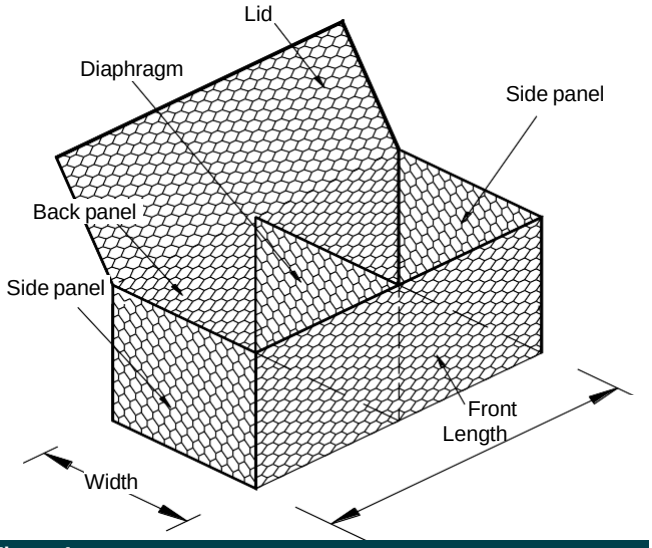


Figure 1

Steel wire mesh
The nominal tensile strength of the wire mesh shall be as per Table 2; test done as per EN 10223-3:2013.
The punch strength of the wire mesh shall be as per table 2; test done as per UNI 11437.

Wire
The steel wire used in the manufacture of the unit is galvanized with **Galmac**®, a Zn-5%Al alloy. The standard specifications of 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 Gabions shall have a tensile strength of 350-550 N/mm^2 as per EN 10223-3:2013. Wire tolerances (table 4) are in accordance with EN 10218 (Class T1).
2. **Elongation:** Elongation at fracture shall not be less than 8%, at a gauge length of 250 mm, as per EN 10223-3: 2013.
3. **Galmac® coating:** Minimum quantities of Galmac® (table 4)

meet the requirements of EN 10244-2 (table 2 - Class A).

4. **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, according to EN 10244.
5. **Outwearing accelerated aging test:** When subjected to

test in sulphur dioxide environment (EN ISO 6988) after 28 cycles of discontinuous test, the mesh shall not show more than 5% of DBR (Dark Brown Rust).

The tolerance of the nominal mesh opening 'M', which is the distance between the axes of two consecutive twists, is according to EN 10223-3.

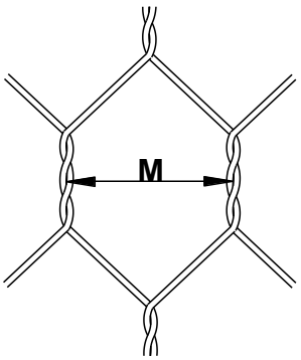
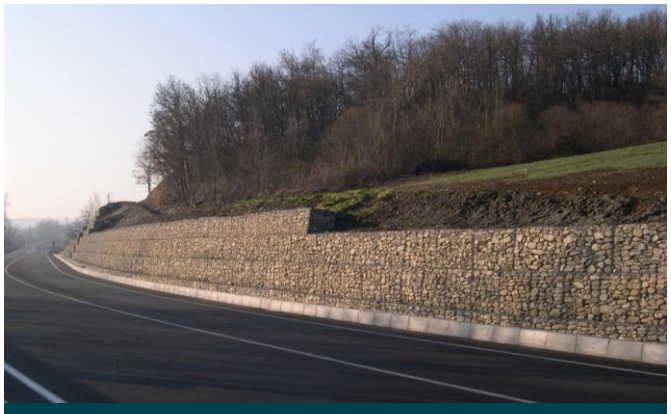


Figure 2



Example of a Gabion wall

CE
10
1301-CPD-0615

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1. Sizes of Gabions			
L=Length (m)	W=Width (m)	H=Height (m)	# of cells
2	1	0.5	2
3	1	0.5	3
4	1	0.5	4
1.5	1	1	1
2	1	1	2
3	1	1	3
4	1	1	4

All sizes and dimensions are nominal.
Tolerances of ± 5% of the width, height and length of the gabions shall be permitted (EN 10223-3:2013).

Quantity Request

When requesting a quotation, please specify:

- size of units (length x width x height, see table 1)
- mesh type
- type of coating and diaphragms

EXAMPLE: 100 x gabions 2x1x1m, mesh type 8x10, Wire Ø 2.7 mm, Galmac coated, with diaphragms

Lacing Operations

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

- diameter: 3.00 mm
- tensile strength: >1720 MPa
- Pull–apart strength > 2.0 kN

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

2. Standard Mesh Wire					
Mesh type	M (mm)	Tolerance (mm)	Wire Ø int/ext (mm)	Mesh Tensile Strength (kN/m)	Punch Strength (kN)
6x8	60	-0/+8	2.7	55	82
8x10	80	-0/+10	2.7 3.0	50 60	67 82

3. Standard wire diameters				
		Mesh Wire	Selvedge Wire	Lacing Wire
6x8 Mesh Type	ø mm	2.7	3.4	2.2
8x10 Mesh Type	ø mm	2.7	3.4	2.2
		3.0	3.9	2.4

4. Wire tolerances and coatings						
Wire diameter	mm	2.20	2.40	2.70	3.00	3.40
Wire diameter tolerance	(±) mm	0.06	0.06	0.06	0.07	0.07
Minimum Galmac quantity	g/m²	230	230	245	255	265

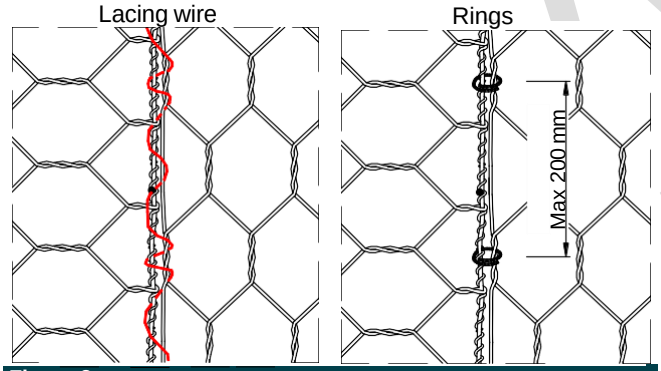
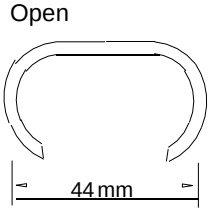


Figure 3

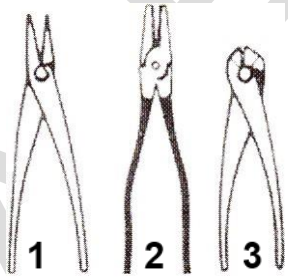


Open

Closed

Nominal overlap of 25 mm after closure

Figure 4



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

B Pneumatic Spenax tool

C Manual tool

Figure 5