

WELDED GABIONS

GALMAC® (Zn95/Al5 ALLOY) COATED

Welded gabions are baskets made of welded wire mesh, with mechanical characteristics according to BS EN 10223-8 produced in compliance with CPR - Construction Product Regulation 305/2011, and having EC marking in compliance with ETA 17/0295. The management and production system is certified in compliance with ISO 9001.

Welded gabions are filled with stones at the project site for the construction of landscaping, cladding and architectural purposes (Figure 1) and limited types of retaining structures.

The gabion is divided into cells by means of diaphragms positioned at approximately 1m centres. Standard Mesh-Wire sizes of GalMac® coated gabions are shown in Table 1.

Wire

The steel wire used in the manufacture of the gabion is heavily galvanized with a Zn95%/Al5% alloy. The standard specifications of wire tolerances and coating are shown in Table 1.

- Tensile strength:** the wire used for the manufacture of gabions shall have a minimum tensile strength of >500 MPa (typically 600-780 MPa), in accordance with EN 10223-8.
- GalMac® coating:** the minimum quantity of Zn95%/Al5% alloy coating shown at Table 1 and meets the requirements of BS EN 10244-2 (Table 2, 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, according to EN 10244-1.
- Outwearing accelerated ageing test in salt spray:** when the welded wire mesh is subjected to the neutral salt spray test (ISO 9227) after 1000 hours of exposure the mesh shall not show more than 5% of DBR (Dark Brown Rust).
- Outwearing accelerated ageing test in sulphur dioxide environment:** when the welded wire mesh is subjected to test in a sulphur dioxide environment (ISO 6988) after 28 cycles of discontinuous test the mesh shall not show more than 5% of DBR (Dark Brown Rust).
- Durability**
Refer to BS EN 10223-8 Annex 1.

Mesh

Dimensions of mesh are shown on Table 1 and are subject to tolerances.

The average shear strength of 4 welds selected at random from one panel shall be $\geq 75\%$ of the breaking load of the wire, with no single weld below 50% in accordance with BS EN 10223-8.

Diaphragms are fixed at approximately 1.0m c/c along the gabion for units longer than 1.5m.

Lacing

All joints and connections shall be formed with continuous 2.2mm dia. GalMac® coated lacing wire or high-tensile steel 3mm dia. GalMac® coated 'C' rings. 'C' rings shall have a tensile strength of >1720 MPa and when closed, have a pull-apart strength >2.0 kN and a nominal overlap of 25mm after closure.

Units are supplied with sufficient lacing wire for standard installations.

Non-standard units

Non-standard sized units are available to special order including:

- Combinations of welded mesh diameters within the unit. E.g. 4mm face with 3mm body panels
- Smaller units for cladding operations
- Conditions apply for special (non-stock) orders



Figure 1: Example of a welded gabion application

Table 1: Standard Mesh and Wire sizes

Mesh opening	75 x 75mm		
Mesh tolerance	+/- 3mm		
Wire diameter	3mm	4mm	5mm
Min. coating	255 g/m ²	275 g/m ²	280 g/m ²
Coating type	GalMac® Zn95% / Al5%		

Table 2: Standard Unit sizes

Length (m)	Width (m)	Height (m)
1.95	0.975	0.975
1.95	0.975	0.450
1.5	0.975	0.975
0.975	0.975	0.975

* Other gabion sizes and mesh diameter combinations available to order

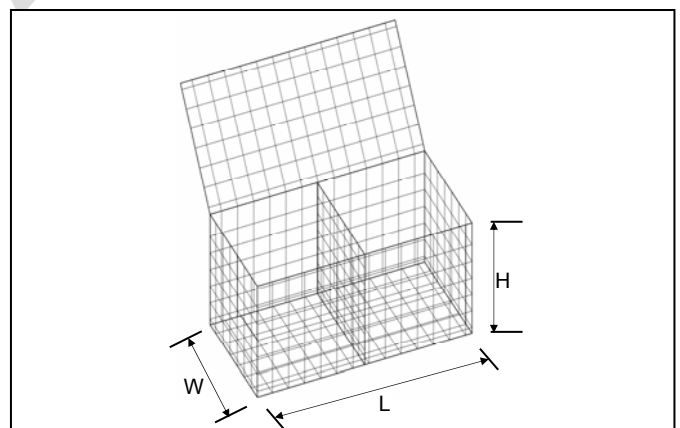
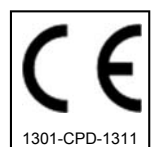


Figure 2: Welded gabion schematic

Maccaferri reserves the right to amend product specifications without notice and specifiers / purchasers are requested to check as to the validity of the specifications they are using.

ETA n. 17/0295



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