

# CASTORO RENO MATTRESS ZINC COATED

TECHNICAL DATA SHEET - Rev. 05, Date 01-12-2011

Castoro Reno Mattresses are units made of hexagonal double twisted wire mesh. They are filled with rocks at the project site to form flexible, permeable, monolithic structures such as river bank protection and channel linings for erosion control.

The Castoro Reno Mattress is divided into cells by means of double diaphragms positioned at approximately 1m centers (Figure 1). The base of the unit and the internal diaphragms are manufactured from one continuous mesh panel. In order to reinforce the structure, all mesh panel edges are selvaged with a wire having a greater diameter (Table 3). Standard sizes of Zinc coated Castoro Reno Mattresses are shown in Table 1.

## Steel wire mesh

The double twisted steel wire mesh used in the production of Castoro Reno Mattresses has mechanical characteristics higher than those stated in EN 10223-3.

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

## Wire

The steel wire used in the manufacture of the mattress is heavily galvanized with Zinc. The standard mesh specifications are shown in Table 2.

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 between 380-550 N/mm<sup>2</sup>, which exceeds the strengths referred to in EN 10223- Wire tolerances (Table 3) are in accordance with EN 10218 (Class T1).
- 2. 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.
- 3. Zinc coating:** minimum quantities of Zinc shown in Table 3 meet the requirements of EN 10244-2 (Table 1 - Class A).
- 4. Adhesion of Zinc:** the adhesion of the Zinc coating to the wire shall be such that, when the wire is wrapped six turns around a mandrel four times the diameter of the wire, it does not flake or crack when rubbing it with bare fingers, in compliance with EN 10244.

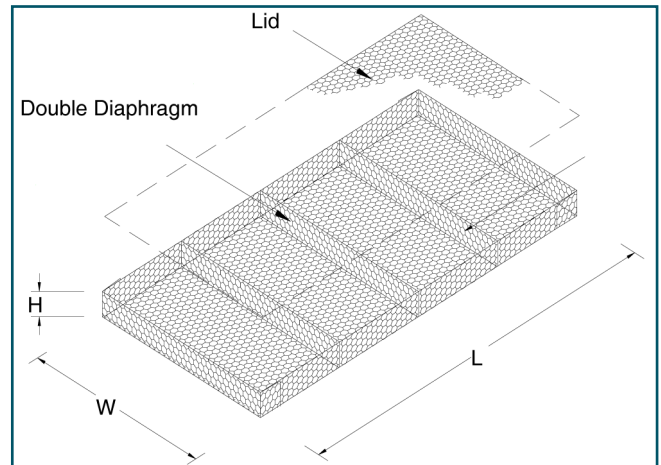


Figure 1

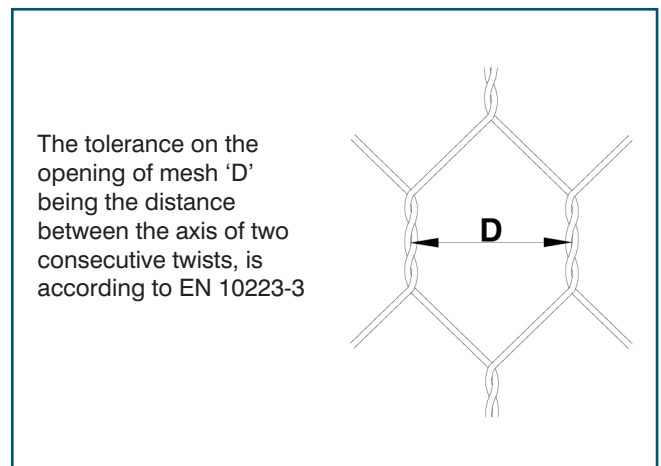


Figure 2



Typical Castoro Reno Mattress Application



Typical Castoro Reno Mattress Application

QUALITY - SUPPORT - EXPERTISE

GEOFABRICS.COM.AU

 GEOFABRICS®

L=Length (m)	W=Width (m)	H=Height (m)	# of cells
2	1	0.30	2
6	2	0.17	6
6	2	0.23	6
6	2	0.30	6

All sizes and dimensions are nominal. Tolerances of  $\pm 5\%$  of the width, height, and length of the Reno Mattresses shall be permitted (Table 1).

### 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 as an alternative to lacing wire when Zinc coated mattresses are used (Figs. 3, 4):

- diameter: 3.00 mm, ASTM A975-97, Table 1
- tensile strength: 1380-1660 MPa, ASTM A764, Table 2, Class 1
- coating thickness: 244g/m<sup>2</sup> ASTM A764, Table 7, Class 3

Spacing of the rings must not exceed 150 mm (Fig.3)

Please contact Geofabrics for detailed installation information

Type	D (mm)	Tolerance	Wire Diameter (mm)	Mesh Tensile Strength (kN/m)
6x8	60	+16%/-4%	2.00	32

	Mesh Wire	Selvedge Wire	Lacing Wire
Wire Diameter $\phi$ mm	2.0	2.4	2.2
Wire Tolerance ( $\pm$ ) $\phi$ mm	0.05	0.06	0.06
Min. Quantity of Zinc gr/m <sup>2</sup>	215	230	230

### Quantity Request

When requesting a supply quotation, please specify:

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

EXAMPLE: No. 100 Castoro Reno Mattresses 6x2x0.17m - Mesh type 6x8 - Wire diam. 2.00 - Zinc coated

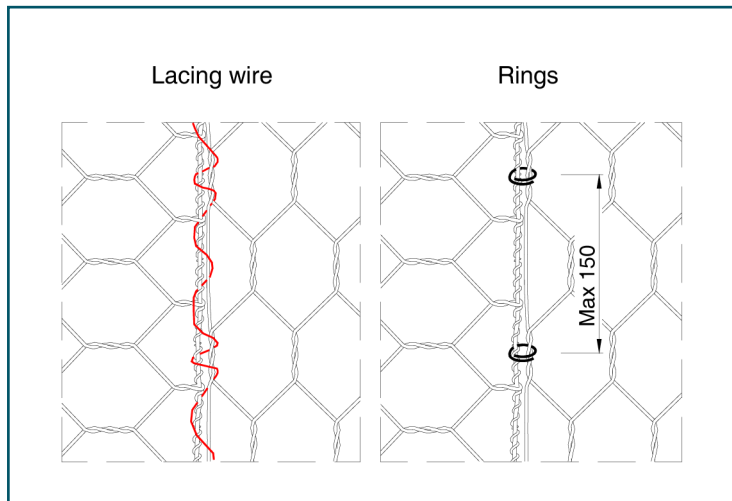


Figure 3

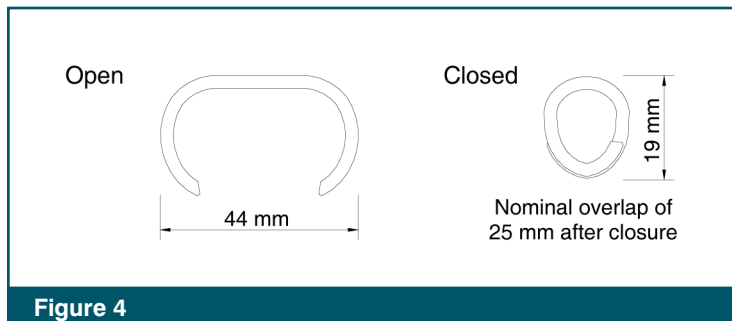


Figure 4

	<p style="text-align: center;"><b>A</b></p> <ol style="list-style-type: none"> <li>1. Pliers</li> <li>2. Pliers with nipper</li> <li>3. Nipper</li> </ol>
	<p style="text-align: center;"><b>B</b></p> <p style="text-align: center;">Pneumatic Lacing tool</p>
	<p style="text-align: center;"><b>C</b></p> <p style="text-align: center;">Lid stretching tool</p>

Figure 5

Geofabrics reserves the right to amend product specifications without notice and specifiers are requested to check as to the validity of the specifications they are using. The information presented herein is, to the best of our knowledge and belief, correct. The validity of the information relative to the soil and engineering conditions must be ascertained by a suitably qualified person. No warranty is either expressed or implied. Unauthorised reproduction or distribution is prohibited.