MACCAFERRI

TECHNICAL DATA SHEET

Rev: 02a, Date 04.05.2024

GABION
2.7 POLIMAC®

Gabions are baskets manufactured from double twisted hexagonal woven steel wire mesh type 8x10, made of PoliMac® coated steel wire.

Gabions are typically filled with stones at the project site to form flexible, permeable, monolithic structures such as retaining walls, channel linings and weirs for erosion control projects.

Units are produced in compliance with The Construction Products (Amendment etc.)(EU Exit) Regulations 2020 on the basis of UKAD 200019-00-0102 and UKTA-0836-22/0019.

GABION PERFORMANCE			8x10 2.7 HT POLIMAC®
Physical Properties			
Steel wire diameter (int. / ext.)	EN 10218-2	mm	**2.70 / 3.70**
Selvedge wire diameter (int. / ext.)	EN 10218-2	mm	**3.40 / 4.40**
Galmac coating	EN 10244-2	Class	**Class A**
Mechanical Performances			
Mesh Tensile Strength	EN 10223-3	kN/m	**55 ± 5**
Gabion Serviceability Coefficient (GSC)	- -		**978 (h=0.5 m)** **489 (h =1.0 m)**
Mesh Punching Load	ASTM A975-21	kN	**28 ± 4**
Durability Performances			
SO_2 corrosion resistance	ISO 6988	Cycles	**> 28**
Salt Spray (5% DBR)	ISO 9227	Hours	**> 6,000**
UV resistance (@ 2,500 hours) (1)	ISO 4892-3	%	**< 25**
Abrasion resistance	ASTM A975-21	Cycles	**> 400**
Brittleness Temperature	ASTM D746-15	°	**< −35**
Corrosion Spread (@ 2,500 hours)	ASTM A975-21	**Corrosion length less than a mesh opening**	
Environmental and Sustainability Properties			
Global Warming Potential ($GWP_{100\ yrs}$)(2)	EN 15804	$kgCO2_{equiv}$ / Kg product	**< 0.906**
Leachate Test	EPA 6020B	µg / L	**Lower than the limits set by regulations**(3)
PFAS in Water Test(4)	EPA 537.1	ng / L	**Not detected**
Environmental Harmlessness	M GEOK E:2016	**Environmentally Uncritical**	

Download the EPD from maccaferri.com/EPD

Download the digital model for free on bimstore or on maccaferri.com/BIM

UKTA-0836-22/0019

0836-CPR-24/F7078

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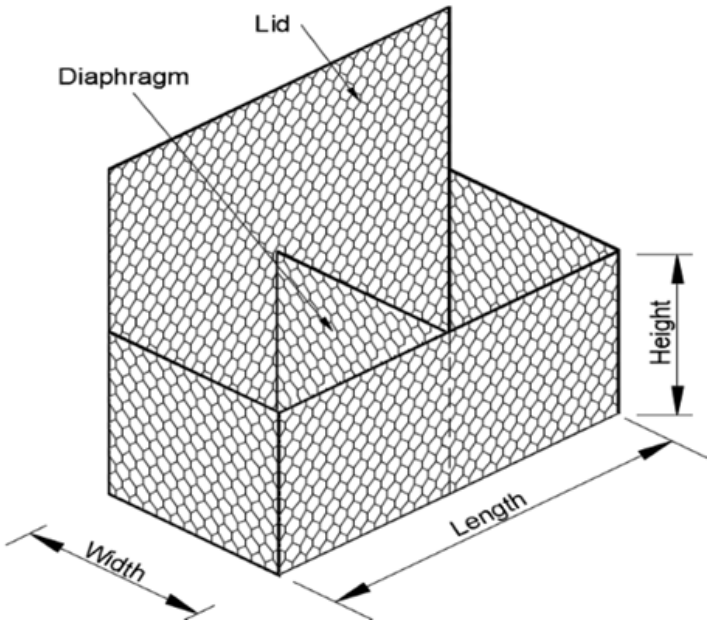
Gabion



Gabion sizes		
Length (m)	Width (m)	Height (m)
1	1	1
1	0.5	0.5
2	1	0.5
1.5	1	1
1.5	1	0.5
2	1	1
2	0.5	0.5
3*	1	1
4*	1	1

Sizes and dimensions are nominal.
Tolerances of ±5% of the length, width and height shall be permitted
(*) Special Order only

Accessories (*):

Stainless Steel C-Rings:

- Diameter: 3.00 mm
- Tensile strength > 1,550 MPa
- Pull–apart strength > 2.0 kN
- Max spacings: 200 mm

Bracing ties: Steel wire or preformed self locking ties (i.e. MacTie)

(*) The accessories are NOT included, unless explicitly mentioned in the price offer.
For additional details, see the installation manual.

DESIGN THE CHANGE

The **Gabion Serviceability Coefficient** (GSC) is the global design factor to evaluate the performance of the gabion structure and the consequent deformation after 120 years of service life, in category C4 according to ISO 9224. GSC considers the degradation effects due to chemical aggressions, installation damage, UV rays exposure, temperature variations and abrasion. Use Maccaferri **GAWAC software** to effectively utilize the GSC in the design of gabion walls.

(1) UTS/elongation @ break of the base compound after 2,500 hrs exposure to QUV-A do not change more than 25% from initial test results.
(2) Value reported in the EPD certificate S-P-01465 issued in accordance with ISO 14025 and EN 15804+A1 to Maccaferri with reference to the Gabions product family with validity till December 2023.
(3) Test preparation in accordance with EPA 1312; The presence or not of 31 different metals were analysed in the leachate. Regulations: (a) Water Framework Directive 2000/60/EC; (b) CCME Water Quality Guidelines for the Protection of Aquatic Life, Freshwater; (c) U.S. EPA National Recommended Water Quality Criteria (Aquatic Life, Freshwater), 2006.
(4) The presence or not of 28 different PFAS were analysed. The PFOS and PFOA were not detected at <2 ng/L, while other PFAS and their derivatives were also not detected between <2 ng/L and < 4 ng/L.

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