MACCAFERRI

TECHNICAL DATA SHEET

Rev: 02a, Date 16.02.2026

8x10 GABION

2.7 BIO POLIMAC®

Gabions are baskets manufactured from double twisted hexagonal woven steel wire mesh type 8x10, made of BIO PoliMac® coated steel wire, filled with stones at the project site.

The BIO PoliMac® polymer coating is made from ISCC PLUS-certified plastic which can originate from recycled fossil material, recycled bio-based material and plant-based material.

The use of recycled bio-based polymer allows a reduction of CO_2 emissions greater than 150% compared to the equivalent polymer obtained from fossil feedstock[1].

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 PERFORMANCES			8x10 2.7 HT BIO POLIMAC®
Physical Properties	**Standard**	**Unit**	
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	EAD 200019-01-0102	kN	**28 ± 4**
Unconfined Compression Strength	EAD 200019-01-0102	kPa	**200 ± 50**
Flexural Integrity	EAD 200019-01-0102	**No wire breaking and no connection lines (joints) failure**	
Durability Performances			
Service life of polymer coating at 25 °C	UL 746B EN 60216-8	Years	**> 125**
SO_2 corrosion resistance	ISO 6988	Cycles	**> 28**
Salt Spray (5% DBR)	ISO 9227	Hours	**> 25,000**
UV resistance (@ 2,500 hours) [2]	ISO 4892-3	%	**< 25**
Abrasion resistance in dry conditions	ASTM A975	Cycles	**> 400**
Abrasion resistance in wet conditions	ISO 22182	Weight loss	**< 2 %**
Brittleness Temperature	ASTM D746	°C	**< −35**
Corrosion Spread (@ 2,500 hours)	ASTM A975	**Corrosion length less than a mesh opening**	
Environmental and Sustainability Properties of the Bio Polimac coating			
Global Warming Potential ($GWP_{100\ yrs}$)	EN 15804	$kgCO2_{equiv}$ / Kg $_{product}$	**< 2.00**
Certified Mass Balanced Material	ISCC PLUS		**> 80%**
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**
Smoke toxicity	ISO 5659-2, EN 17084		**Index of toxicity $CIT_G(8)$ < 0.10**
Environmental Harmlessness	M GEOK E:2016	**Environmentally Uncritical**	

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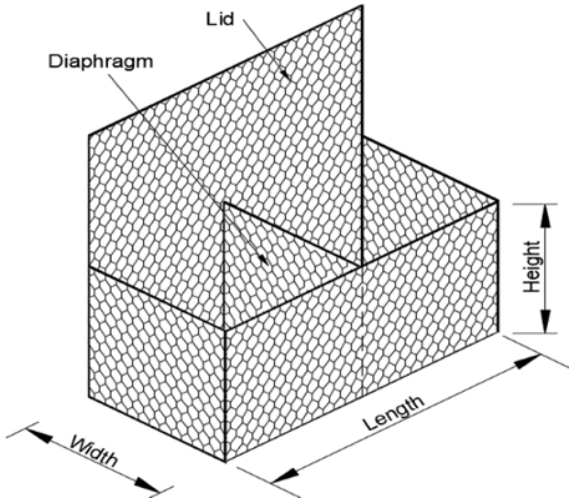
Gabion



Certificate Holder ISCC International Sustainability & Carbon Certification

ETA n. 22/0515

CE

1301-CPR-2554

ECO PLATFORM EPD VERIFIED kiwa Ecobility Experts

UKTA-0836-22/0019

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0836-CPR-24/F7078

Gabion sizes

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

Sizes and dimensions are nominal.
Tolerances of ±5% of the length, width and height shall be permitted

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) Information provided by the ISCC PLUS certified raw material supplier outside of scope of the ISCC PLUS certification
(2) 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.
(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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