



CUBIMAC
3.4 POLIMAC®

CubiMac are special preassembled baskets manufactured from robust double twist steel wire mesh 8x10 type Polimac® coated steel wire 3.4 mm diameter. CubiMac have been specifically developed for their use in construction sites where the in-situ filling is not possible or inconvenient (i.e. installation underwater or track railway possessions)



CubiMac can be filled using a special frame combined with a shaking table to assure the stones compaction by vibration; the units are equipped with polyester round slings to enable an easy handling using standard lifting equipment.

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.

CUBIMAC PERFORMANCES			8x10 3.4 HT POLIMAC®
Physical Properties			
Steel wire diameter (int. / ext.)	EN 10218-2	mm	3.40 / 4.40
Selvedge wire diameter (int. / ext.)	EN 10218-2	mm	3.90 / 4.90
Galmac coating	EN 10244-2	Class	Class A
Mechanical Performances			
Mesh Tensile Strength	EN 10223-3	kN/m	85 ± 5
Gabion Serviceability Coefficient (GSC)	--		678 (h =1.0 m) 
Mesh Punching Load	EAD 200019-01-0102	kN	35 ± 2
Unconfined Compression Strength ⁽¹⁾	EAD 200019-01-0102	kPa	200 ± 50
Flexural Integrity ⁽²⁾	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) ⁽³⁾	ISO 4892-3	%	< 25
Abrasion resistance in dry conditions	EAD 200019-01-0102	Cycles	> 550
Abrasion resistance in wet conditions ⁽⁴⁾	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 			
Global Warming Potential (GWP _{100 yrs})	EN 15804	kgCO ₂ -equiv / Kg product	< 2.00
Leachate Test	EPA 6020B	µg / L	Lower than the limits set by regulations⁽⁵⁾
PFAS in Water Test ⁽⁶⁾	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	



Download the EPD from maccaferri.com/EPD



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

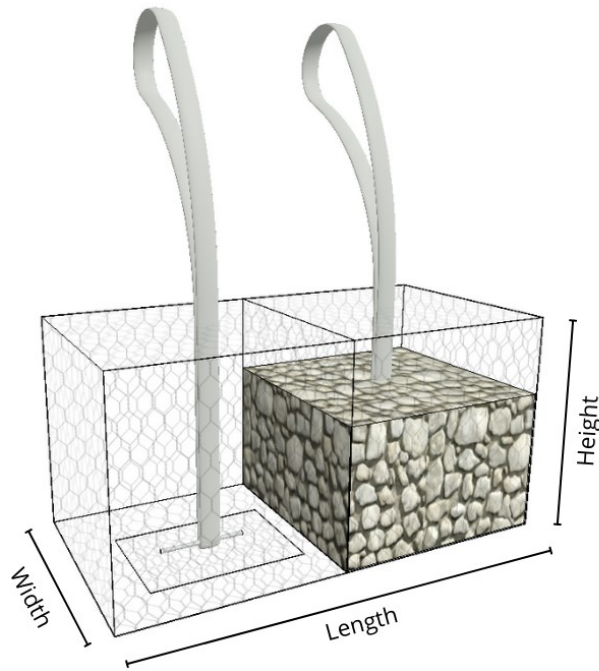


UKTA-0836-22/0019



0836-CPR-24/F7078

CubiMac



LIFTING INSTRUCTIONS

The lifting and the handling of the CubiMac prefilled units shall be made by means of an adequate lifting device. During the lifting operations all the lifting loops must be used at the same time and must be vertical, ensuring they are not twisted or knotted.

CubiMac sizes				Accessories (*):
Length (m)	Width (m)	Height (m)	Nominal Weight in air (t)*	Stainless Steel C-Rings: <ul style="list-style-type: none"> • Diameter: 3.00 mm • Tensile strength > 1,550 MPa • Pull-apart strength > 2.0 kN • Max spacings: 100 mm Bracing ties: Steel wire or preformed self locking ties (i.e. MacTie)
1.0	1.0	0.5	1	
2.0	1.0	0.5	2	
1.0	1.0	1.0	2	
2.0	1.0	1.0	4	
Sizes and dimensions are nominal. Tolerances of ±5% of the length, width and height shall be permitted * The actual weight may vary depending of the unit weight of the filling stones.				(*) 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 or CubiMac 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 CubiMac walls.



- (1) As per ISMGEO test report: "Unconfined compression tests on gabion elements". Tests conducted on gabion element made of mesh type 8x10 with 2,7/3,7 mm diameter Polimac® coated wire.
- (2) Flexural Integrity tests conducted on gabion element made of mesh type 8x10 with 2,7/3,7 mm diameter Polimac® coated wire. The characteristics of filling stones fulfil the requirements according to E.2, Annex E, EAD 200019-01-0102.
- (3) 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.
- (4) Tests conducted on mesh type 8x10 with 2,7/3,7 mm diameter Polimac® coated wire
- (5) 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.
- (6) 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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