

MAC.RO. SYSTEM - HEA PANEL

HIGH ENERGY ABSORPTION ROCKFALL PROTECTION

HEA Panel (High Energy Absorption) combines high strength features of the wire rope with the steel knot.

The knot is made by two bindings, each one obtained by looping a pair of steel 3.00 mm wires coated with Galmac, a Zinc-Aluminium(5%) alloy. The two bindings tightly envelop the ropes crossing each other.

The panel is made of square meshes manufactured with one rope, closed by a pressed aluminium ferrule, according to EN 13411-3.



Application

Standard panel dimensions			
Nominal mesh size	Wrapping rope diameter (mm)	Panel height H (m)	Panel length L (m)
250X250	8	Up to 5	Up to 10
300x300			
400x400			
300x300	10	Up to 5	Up to 10
400x400			

External panel size is nominal (tolerance $\pm 5\%$)

Mesh size is nominal (tolerance $\pm 10\%$)

* Other dimensions of panel are available upon request.

Knot - Binding bars	
Double Envelop of two pairs of wires	
Steel wire coated with Galmac	EN 10244-2, Class A
Diameter (mm)	$\varnothing = 3$ (UNI EN 10218)
Tensile strength of the wire used for the bars (N/mm ²)	380 - 500

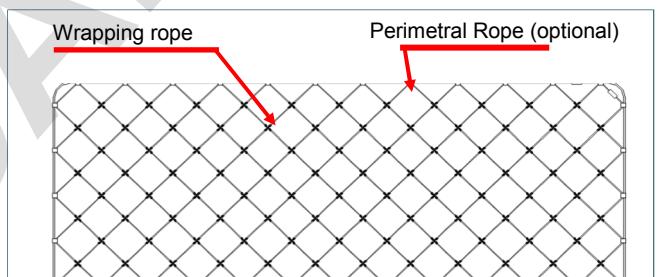
Knot - Tear resistance	
Maximum load of tear break (kN)	24.4

Steel ropes		
Wrapping rope		
Steel wire rope (diameter and construction) (EN 12385-2, EN 12385-4)	Diameter \varnothing (mm)	
	8	10
	6x7+WSC	6x19+WSC
Rope grade (EN 12385-2)	1770 N/mm ²	
Perimetral rope (optional)		
Diameter \varnothing (mm)	10 - 12 - 14 - 16	
Construction (EN 12385-2)	6x19+WSC	
Rope grade (EN 12385-2)	1770 N/mm ²	

Coating of (wrapping and perimetral) ropes	
Standard	Plus
Zinc coating	Galmac (Zn-Al5%) coating
Class B (EN 10264-2)	Class A (EN 10264-2)



Lacing knot detail



Example of HEA PANEL structure

QUANTITY REQUEST

When a quotation is required, please specify:

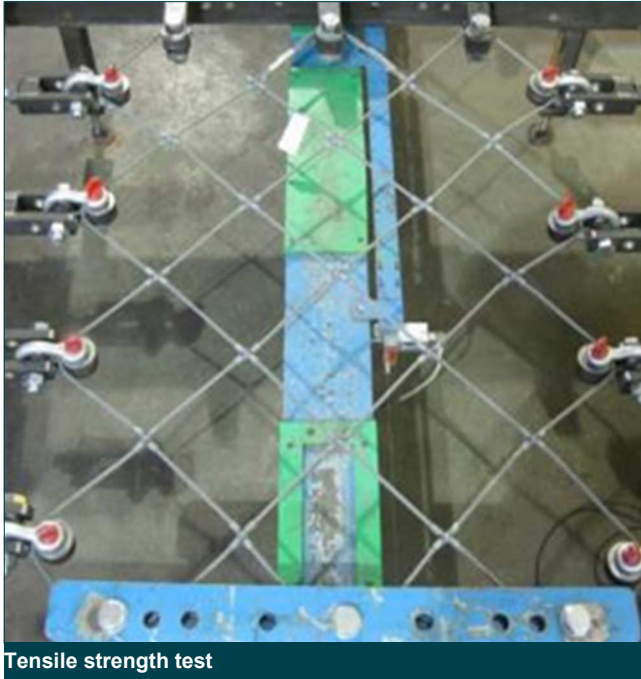
- Panel size (height x length in m)
- Mesh size (in mm)
- Wrapping rope diameter (in mm)
- Edge rope diameter, if any (in mm)
- Zinc coating on the ropes (Class A or B)

Example 1:

N. 30 HEA Standard Panels, 6x3 m, 300x300 mm, wrapping rope 8 mm, edge rope 12 mm.

Example 2:

N. 60 HEA Plus Panels 5x4 m, 400x400 mm, wrapping rope 10 mm, no perimetral rope.



Tensile strength test

Tensile strength (UNI 11437)

Nominal mesh (mm)	Wrapping rope diameter (mm)	Nominal tensile strength (kN/m)
250x250	8	237
300x300	8	211
300x300	10	299
400x400	8	156
400x400	10	221



Punching resistance test

Punching resistance (UNI 11437)

Nominal mesh (mm)	Wrapping rope diameter (mm)	Ultimate punching load (kN)	Ultimate punching displacement (m)
250x250	8	277	240
300x300	8	271	280
300x300	10	456	310
400x400	8	212	270
400x400	10	344	310

WARNING: Install the product in accordance with National Security Requirements! If the job is done with suspension or security ropes, personal protective equipment against fall risk must be connected with anchor points in agreement with EN 795.

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Accredia's and UKAS' s accreditation.