Polymer Coated Gabion Baskets

Bi-Axial Welded Wire Mesh BS EN 10223-8:2013

Polymer Coted - Grey

CORDEN POLYMER COATED WELDED WIRE MESH GABION BASKETS

Corden Polymer Coated Welded Wire Gabion Baskets are manufactured from either 2.70mm or 3.20mm thick galfan coated (95%Zn/5%Al) bi-axial welded wire mesh with an additional organic polymer powder coating (grey) of 0.25mm nominal radial thickness. The mesh fabric is formed by electrically welding at each and every intersection, hard drawn steel line and cross wires into a dimensionally stable bi-axial square metric mesh of size 75mm x 75mm.

All wire is in accordance with BS EN 10218-2:2012 and BS EN 10223-3:2013 with an ultimate tensile strength of between 540 to 770N/mm². The organic polymer powder coating is in accordance with BS EN 10245-1:2011 and BS EN 10245-2:2011.

Corden PVC Coated Welded Wire Mesh Gabion Baskets can be used where the life expectancy is 120 years.

Corden Polymer Coated Welded Mesh Gabion Baskets		
Characteristic	Unit / Test Method	Corden PVC Coated Gabion Basket
Material Properties		
Wire Thickness	mm	2.70, 3.80
Total Wire Thickness incl. PVC Coating	mm	3.20, 4.30
Mesh Aperture	mm	75.0 x 75.0
Corrosion Resistance	BS EN 10244-2:2009 (Class A)	Galfan Coated (95% Zn / 5% Al) with an extruded PVC coating (grey) of 0.25mm nominal radial thickness
Tensile Strength	N/mm²	540 - 770
Designation of Sizes		Length x Width x Height
Stone Infill Nominal Size	mm	100 – 150 / 100 - 200
Design Life	Years	Up to 120 years

INSTALLATION

POLYMER COATED LACING WIRE: Polymer Coated Lacing wire is supplied as standard on Polymer Coated Gabion units for all joints. Additional Polymer Coated Lacing Wire can be purchased from Corden as required.

Adjacent panels are joined together by a continuous lacing wire, weaving in and out of each mesh. As the wire is weaved in and out of the mesh it is pulled in the direction of weaving which then forms a tight joint.

All vertical joints and horizontal joints are to be laced. At the start and finish of the run of lacing, the wire should be wrapped around the panel wires 3 times.

Lacing Wire is of a nominal 2.2mm wire diameter with a nominal 0.5mm organic polymer powder coating (grey) in accordance with BS EN 10218-2:2012 and has a tensile strength that falls within a range of 350 to 550 N/mm2.

INTERNAL BRACING: Internal bracing is formed by creating a continuous windlass tie between the face and rear of the exposed cells within the structure. For 1m high units, two internal windlass bracings are required at third widths and at each third height of the gabion.

In all cases the windlass tie is to span two or three mesh openings on the front and rear cells to spread the load. The exposed end gabions to the wall should also be braced in both directions to prevent end face deformation.

Contact Corden for a copy of our Gabion Installation Guide for more information.

GEOTEXTILE SEPARATORS

Where a geotextile separator between the rear of the gabion and backfill is to be used, refer to the engineer's design proposal and specification.

FOUNDATIONS:

Reference to the engineer's design proposal must be made with respect to foundation requirement, wall inclination, face configuration (stepped, flush or combination thereof), drainage and backfilling requirements. Any soft areas in the sub grade should be excavated and replaced with a granular material to the engineer's requirements.

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FILLING

Units are to be filled with a hard, durable, non-frost susceptible rock, stone or clean crushed concrete as specified by design. The grading of the fill is to be 100 to 150mm or 100 to 200mm (6G). Where dual fills of the same grading are specified a separation panel is optional. Where the secondary fill grading is less than the mesh aperture size, it is necessary for the fills to be separated using pre-cut correx panels or geotextile that is inserted into the gabion on site. If this is the case, then this will require the fitting of an additional longitudinal diaphragm set back from the face. In such instances it is important to refer to the engineer's design proposal with respect to additional drainage that may be required. It is also important to note that cohesive fills are not to be used as a secondary fill within gabions.
The units shall be filled in layers not exceeding 340mm, if large voids are present then the stone must be re-orientated to minimise voids. Where specified the gabions are to have a hand placed front face.
The units shall be filled such that the mesh lid bears down onto the gabion filling material. It may be beneficial to blind the top of the filled unit with a 20 to 50mm aggregate.
Filling should be staged so that no adjacent cells have more than a half difference in the level of filling for units of greater height than 500mm.
To assist in maintaining face alignment and reduce deformation, the use of external formwork i.e. timber or scaffold tubes can be tied onto the external face of the structure at third heights and then removed upon completion.

GABION SIZES

It should be noted that it is industry standard for gabions to be quoted as overall nominal sizes. The actual gabion sizing is dependent upon the physical mesh configuration.
Clarification should always be sought from the manufacturer in relation to gabion sizing.

Designation of sizes **length x width x height**

Gabion standard unit lengths: 975mm or 2025mm
Gabion standard unit widths: 450mm, 675mm, 975mm, 1350mm, 1500mm or 1650mm
Gabion standard unit heights: 300mm, 450mm and 975mm

Non-standard sizes available in multiples of 75mm on request.

ACCESSORY PRODUCTS

A wide range of accessories are available for use with Corden Gabion Baskets, including:
- POLYMER COATED LACING WIRE
- CL50 GALFAN 'C' RINGS
- ADDITIONAL DIAPHRAGM PANELS
- GABION STONE INFILL MATERIAL
- GEOTEXTILE SEPARATOR FABRIC

HANDLING & STORAGE

It is essential when handling wire products that protective glasses and gloves are worn.
Corden Polymer Coated Welded Wire Mesh Gabion Baskets are delivered flat packed, packaged on timber pallets. Gabions should be stored flat until installation to avoid deformation and stacked no more than 2m high.

ADDITIONAL INFORMATION

For additional information or assistance, please contact Corden directly.

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