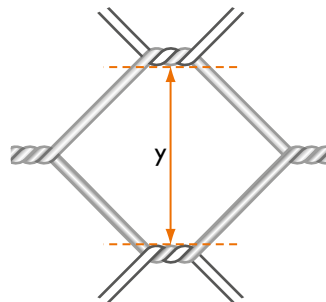




## Gabion Design Specification : Hexagonal Woven Mesh ENV-P2-HEX (Polymer Powder Coated Grey)



### SPECIFIED MESH BI-AXIAL WELDED

Nominal dimensions (y) : Gabions, 80mm Mattresses, 60mm

#### Gabions are to be manufactured and / or supplied by:

Enviromesh, Unit 4 Cartwright Industrial Estate, Spring Garden Road, Longton, Staffordshire, ST3 2TE.

Telephone +44 (0)1782 692310 Fax +44 (0)1782 692318 Email: [enquiries@enviro-mesh.com](mailto:enquiries@enviro-mesh.com) Online: [www.enviro-mesh.com](http://www.enviro-mesh.com)

The certification, materials, manufacture, assembly and installation of the above-mentioned product shall comply with all of the following criteria:

### Certification

1. All mattress materials and accessories must be certified in accordance with **British Board of Agrément (BBA)** certificate no. 00/3682. This is for current General Building Regulations where the life expectancy is **120 years**.
2. All gabion products are manufactured in accordance with the requirements of BS EN 10223-3:2013.
3. Evidence of current BBA certification and relevant certificates of conformity with respect to wire strength and coating weights used in the manufacture of the mesh fabric and wire products are to be issued upon request.

### Materials

The wire used in the manufacture of the mattresses and installation accessories shall comply with the following:

#### Mesh Fabric

The mesh fabric shall be formed by twisting pairs of wires through one and a half turns to form a hexagonal flexible net pattern of nominal size **60mm x 80mm**. The end wires of the mesh panel are terminated by being wrapped around a heavy selvedge wire.



The nominal wire diameter for the mesh fabric shall be **2.00mm** and **2.40mm** for the selvedge wire. All wire is in accordance with BS EN 10218-2:2012 and BS EN 10223-3:2013 with an ultimate tensile strength of between **350 to 500N/mm<sup>2</sup>**.

### Lacing Wire

The lacing wire used for site assembly shall be of a nominal **2.2mm** wire diameter in accordance with BS EN 10218-2:2012 and shall have a tensile strength that falls within a range of **350 to 550 N/mm<sup>2</sup>**.

### Corrosion Resistance

All wire used in the gabion production or accessories shall be Zinc or Zinc 95% Aluminium 5% coated in accordance with BS EN 10244-2:2009 (Class A) with an additional extruded organic polymer powder coating (grey) of **0.5mm** nominal radial thickness.

This organic polymer powder coating is in accordance with BS EN 10245-2:2011.

## Manufacture

### Unit Formation

The mattress is to be formed from the mesh panels such that the ends and base are formed from one continuous sheet.

Diaphragms (partitioning panels) and side panels are connected to the base panel with full length lacing. Diaphragm spacings should not exceed 1.00m along the length of the units. This process must be undertaken in a factory-controlled environment.

### Mattress Sizes

It should be noted that it is industry standard for mattresses to be quoted as overall nominal sizes.

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

Mattress standard unit lengths: 3000mm  
Mattress standard unit widths: 2000mm  
Mattress standard unit heights: 170mm and 300mm



## Assembly and Installation

**Note** Please also refer to manufacturer's installation instructions which are available upon request in either electronic or hard copy format.

### Jointing

Mattresses are supplied with lacing wire as standard for horizontal jointing of adjacent units whilst empty. Lacing is to be continuous along all joints using alternate single and double loops at a maximum spacing of 100mm ensuring that it forms a tight joint. Start or termination of lacing is formed by three turns ensuring the free end is turned into the unit.

If CL50 'C' rings are to be used for final jointing as an alternative to lacing, then these must be installed at every other mesh opening to achieve the required joint strength.

### Geotextile Separators

Where a geotextile separator is used beneath the mattress, refer to the engineer's design proposal and specification.

### Foundations

Reference to the engineer's design proposal must be made with respect to foundation requirements.

Any soft areas in the sub grade should be excavated and replaced with a rockfill material to the engineer's requirements.

### 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 80 to 150mm for 170mm deep units and 100 to 200mm for 300mm deep units.

The units shall be filled such that the mesh lid bears down onto the mattress filling material.