



In the past welded wire steel reinforcement provided crack control in non-structural ground bearing slabs and structural screeds. Now Orlimex can offer an easy to use Basalt Fibre Reinforced Polymer (BFRP) mesh reinforcement - ORLITECH®

#### BENEFITS

- 6 x lighter than steel
- Twice as strong as steel
- Does not corrode
- 5 times less CO<sub>2</sub> production than steel
- Easy to handle & cut - No H&S issues
- Sheet Sizes 4.8M x 2.4M – 3.1M x 2.1M
- Much lower embodied carbon than steel

For reinforcement of ground bearing slabs ORLITECH® provide a prefabricated mesh reinforcement, which can be supplied in various grid sizes with basalt FRP bars up to 12mm in diameter.

Available in three standard sizes as an alternative to steel mesh as follows:

5mm – 200x200 ORLITECH® BFRP mesh v A193 steel mesh

6mm – 200x200 ORLITECH® BFRP mesh v A252 steel mesh

6mm – 150x150 ORLITECH® BFRP mesh v A393 steel mesh

Mesh up to 12mm ORLITECH® BFRP – on request

ORLITECH® mesh does not have welded connections, each BFRP wire is continuous and jointed with a patented connection nodule. ORLITECH® mesh lies completely flat and can be easily cut with a hand grinder.

As in the case of steel reinforcing bars and welded wire reinforcement, ORLITECH® mesh will not prevent cracking. Both forms of reinforcement are inactive until such a time that the concrete cracks. If the concrete cracks the reinforcement becomes active and restricts the width of the crack.

ORLITECH® reinforcement should be supported and tied together to reduce movement during pouring of the concrete to maintain correct placement within the concrete and should be located in the lower third of the slab.

ORLITECH® mesh is suitable for reinforcement of ground bearing slabs up to 200mm thick where the ground bearing capacity is greater than 0.1MPa with a load per M<sup>2</sup> of less than 1 Tonne.

All of our mesh and bar is manufactured to meet the American ASTM D7957 which allows design to ACI 440. We can provide calculations to this design code and are happy to work with the project engineer to ensure the correct Basalt FRP mesh is used for each application.

ORLITECH® BFRP mesh does not yield in the same way as steel, elongation and creep properties vary from steel and as such where reinforcement is required for suspended slabs, raft foundations or beams due to a lower factor of safety, generally, a larger bar is required. All applications should be verified for use by a competent engineer.