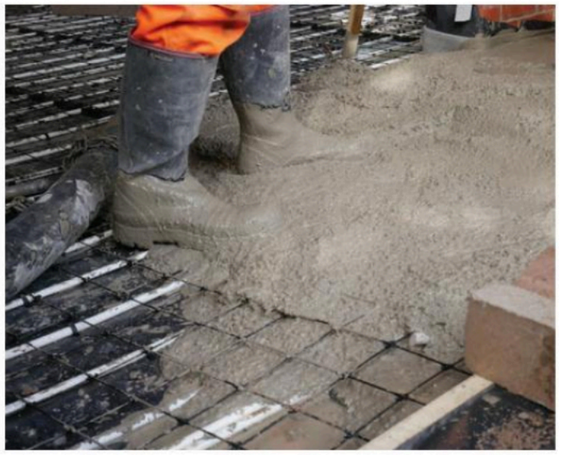
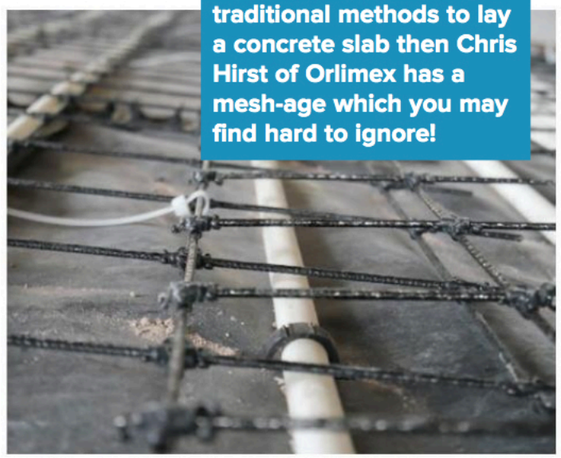
ON MESH-AGE!





If you are "steel" using traditional methods to lay a concrete slab then Chris Hirst of Orlimex has a mesh-age which you may find hard to ignore!

PB We have to confess the name is a new one to us and we suspect many of our readers. Tell us more about the product offering?

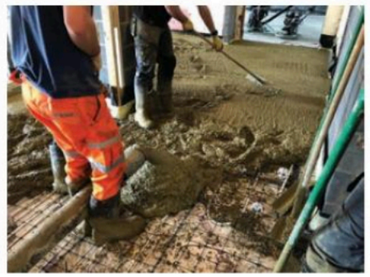
ORLIMEX: We would describe the business as a European building products innovator, specialising in the supply of composite products under the Orlitech brand. The key product, Orlitech mesh, is designed specifically for the small to medium sized housebuilder or developer. The firm has recently launched a range of mesh and bar into the UK market, presenting a modern alternative to traditional steel mesh for use within ground bearing slabs.

PB Sounds interesting but you are obviously up against some long standing traditional housebuilding methods?

ORLIMEX: It's true, the UK housebuilding industry remains rooted in tradition, but with pressures mounting for faster, more efficient, greener and cost effective homes, we're exploring and considering new products and innovations that can support our wider objective. Our composite products have been embraced throughout Europe, and especially so in North America. The material represents a replacement of reinforcement steel mesh for use in concrete builds and is a great proposition for the small to medium sized housebuilder and developer due to its many benefits.

PB What are its key advantages?

ORLIMEX: A main attribute is the material's weight, which is seven times lighter and 2.5 times stronger than traditional steel. Its low weight makes it especially easy to handle and is suitable for all kinds of flooring including underfloor heating – this mesh does not react to temperature fluctuation. Due to lower weight and volume, transportation costs are reduced, the mesh can be easily installed by one person, which significantly reduces assembly time. Mesh for screeds, ground bearing concrete slabs and structural toppings is supplied on a roll (22.5m² – 36m²) which lies completely flat once off the roll reducing installation time, which means that one person can lay Orlitech mesh some three times faster than traditional steel mesh. Health and safety risks are reduced due to the lightweight 0.35kg/m² and ease of cutting. All these characteristics contribute to great financial savings."



PB How easy is it to work with on site

ORLIMEX: "It's a relatively simple treatment and application. Each roll is between 80cm and 1.2m wide and up to 30m long. Due to compact packaging and easy cutting, users are able to save a considerable amount of time when laying at a site and it is convenient for numerous rooms due to its minimal overlap. The mesh is resistant to corrosion and UV radiation. It doesn't change its mechanical features and won't cause a degradation of concrete. Moreover, it prolongs concrete lifetime by up to three times due to the high alkali resistance and anti-corrosion properties. which also means that it is suitable for use in chemically aggressive areas.

Also, the mesh does not conduct electricity and is non-magnetic, so it does not absorb static energy and is redundant to radio waves. It's appropriate for construction and refurbishment of not only housing, but much larger commercial installations.

PB Any concerns over shrinking and cracking?

ORLIMEX: For control of shrinkage and cracking our mesh reinforcement 2.2mm x 100mm x 100mm can be used as a direct replacement for D49 or A142 mesh, used in exactly the same way but laps of only 100mm are recommended. The increased tensile strength means that smaller diameters of wire can be used compared with steel, dramatically reducing installation time. Many companies begin using the composite mesh for day joints but once the benefits are recognised, including a lower overall cost, the decision to use this type of mesh as standard is becoming more common.

Steel mesh is commonly used in ground bearing slabs where control of concrete shrinkage is important, generally we can offer a 3mm 100 x 100 mesh to control cracking in these situations. An engineer is still required to design the slab and we can give help and guidance, and even provide calculations to prove the suitability of this type mesh.

PB What does the composite comprise of?

ORLIMEX: The main constituent is basalt rock, one of the most common in the world. This is spun into fibres and mixed with resins to form bars – the same technology as carbon fibre. The production process uses very small amounts of our natural resources and, as such, has a carbon footprint some 40 times less than steel during production. Carbon off-setting is recognised as a poor solution to our current ecological crisis – the best way forward is to reduce our carbon footprint at source.

There are no welded connections, with each BFRP wire continuous and jointed with a patented connection nodule. The mesh lies completely flat once taken off the roll and can be easily cut with a pair of pliers. Both steel and Orlitech mesh reinforcement are inactive until such a time that the concrete shrinks. Once the concrete shrinks the reinforcement becomes active and prevents/restricts cracking and prevents the screed from curling.

PB Any other points to remember?

ORLIMEX: The reinforcement should always be supported and tied together to reduce movement during pouring of the screed to maintain correct placement within the screed. For structural use larger diameter mesh is provided – due to the increased tensile strength of BFRP a smaller diameter mesh can be used as opposed to that of steel. For load bearing slabs we recommend that we provide you with a structural calculation to ensure the best alternative is used.

The structural reinforcement consists of 6mm – 12mm mesh and can be used to increase the load bearing capacity of the slab. In this case the larger diameter mesh would be used for the bottom layer and the 3mm mesh for crack control for the top layer.

MORE INFORMATION

For further information on Orlimex visit www.rdr.link/BM047