

Easi-Fix Helical Resin Tie



Description

Permagard Easi-Fix Helical Resin Fix Tie is a 4.5mmΦ 304 stainless-steel finned helical remedial wall tie designed to be used to re-tie cavity walls where a resin bond is required at both ends. Resin fixed remedial wall ties are identified in B.R.E. Digest 329 (Table 5) as being suitable for use in un-perforated masonry and in buildings that do not need greater than half an hour fire performance.

Features

- Austenitic 304 stainless steel.
- Quick and easy installation.
- No mechanical parts.
- Multiple drip points.
- High tensile strength with flexibility.
- Allows for thermal movement.
- Effective solution for re-tying cavity walls.
- Tested to BS 1243 and BS DD 140.

The Easi-Fix Helical Resin Wall Ties should be installed into existing cavity walls to re-tie the leaves together where the existing wall ties have failed. They can be used in almost all building materials including brick, lightweight block, timber frames and even mortar. They are ideally suited for use when the quality of the inner and outer leaf substrates is in doubt. Resin fix ties are suitable when mechanical expanders are unusable.

Selection of Tie Lengths

To determine the required cavity wall tie length simply add the penetration depths of each leaf to the width of the cavity and round up to the 25mm increment (e.g. Brick to brick with a 50mm cavity).

External Leaf 100mm – 15mm recess from the external face = 85mm + Cavity 50mm + Internal leaf minimum embedment depth 70mm = 205mm – use a 220mm tie.

Cavity Wall Tie Spacing

1. Masonry wall ties - 900mm x 450mm staggered centres in a domino 5 pattern (2.47ties/m²)
2. Timber frame ties - 600mm x 450mm centres following the line of timber frame (3.7ties/m²)

In both cases, additional ties should be placed at 300mm centres (225mm for blockwork) adjacent to open reveals.

Technical Specification

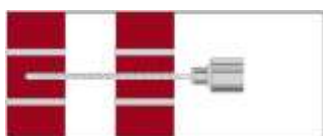
Material	Austenitic Stainless Steel Grade 304 (1.4301)
Diameter	4.5mm
Standard Lengths	195mm, 220mm, 245mm
Pilot Hole Depth	Selected tie length plus 25mm
Pilot Hole Diameter	Diameter of pilot hole to be determined on site - typically 10mm
Fixing Tool	Polyester resin

Typical tensile failure in accordance with BSI DD140

Base Material	Tie Density	Fixing	Minimum Embedment
Hard clay brick	2.5/m ²	Class 2	70mm
Engineering brick	2.5/m ²	Class 3	70mm
Concrete block	2.5/m ²	Class 2	70mm
Soft clay brick	2.5/m ²	Class 2	70mm
These ties are not suitable for use in a cavity wall where the cavity is filled with loose insulating fibres or styrene material			

Test provides indicative values of the tie performance. The couplet test produces results of a conservative nature.

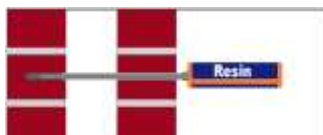
Installation Method



1. Drill a 10mm clearance hole through the outer leaf into the inner leaf material until the recommended depth (70mm) is reached. The installer should check that the drill hole avoids frogs and core holes in the brick if present.



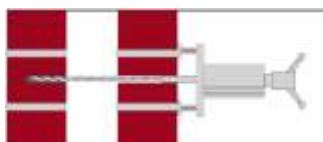
2. Clean inner and outer hole of debris using air pump or pneumatic air jet.



3. Once completely clean fill the inner leaf with fixing resin.



4. Insert the Easi-Fix Helical Resin Tie into the resin making sure the end of the tie is approx. 25mm from the outer face of the outer leaf.



5. Once the resin is fully cured (see manufacturer data sheet) if required the fixing strength of the tie can be tested with a pull tester.



6. Fill the outer leaf with resin allowing the resin to flow along the fins of the tie. Either fill to the surface or if a colour match is required leave the resin recessed and fill with coloured mortar

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