FFX Xtreme Bond Resin Anchor Installation Method.

The following procedure will ensure correct installation of FFX Xtreme Bond resin anchor systems into concrete and solid masonry. (For other base materials seek advice from FFX Technical Support: technical@ffx.co.uk)

CONCRETE and SOLID MASONRY

HOLE PREPARATION:

Once the correct hole diameter and depth has been drilled (see relevant technical data on www.ffx.co.uk) the hole must cleaned and free of dust and debris.

Standing water in the hole should be removed before cleaning.

- Starting from the back [or bottom] of the hole: clean the dust and debris from the hole using compressed air or a blow-out pump / hand pump. The hand pump can be used for holes up to 20mmØ and with a depth of up to 240mm, and compressed air ('oil free' with a minimum pressure of 6 bar) should be used for larger diameter and deeper holes. Repeat 3 times.

- With a suitable bottle brush: nylon for brickwork and steel for concrete, brush the hole a minimum of 3 times. For deep holes an extension rod to reach the bottom of the hole will be required.

- Repeat the above brushing / cleaning sequence 3 times ending with a final use of the compressed air or the hand pump.

- If the hole is diamond drilled it is essential that any dried slurry is removed from the hole, and it is generally recommended that the hole is roughened with a masonry drill prior to injection with resin. The hole should then be prepared as detailed above.

For **hollow materials** metal sleeves or plastic sieves may be required; see enclosed CFA sheets.

CARTRIDGE PREPARATION:

- The mixer nozzle should be attached to the cartridge and some resin extruded and wasted until an even mixed colour is achieved.

PUMPING RESIN INTO THE HOLE:

- Resin must be pumped from the back/bottom of the hole and the nozzle gradually pulled from the hole during extrusion. (Special piston plugs are available for deep or large diameter holes).

- If the hole depth is greater than 175mm an extension nozzle should be used on the mixing nozzle to ensure that the resin reaches the back/bottom of the hole. (Available as an accessory from FFX).

- Resin should fill the hole ***1/3*** to ***1/2*** of the depth of the hole.

ANCHOR STUD / REBAR INSERTION:

- The anchor stud or rebar should be installed with a “to and fro twisting” action to ensure an even coverage of the bar/stud.

- The anchor stud must reach the full embedment depth and a little surplus resin should be forced from the mouth of the hole.

    - If this does not occur, then there is insufficient resin in the hole and the stud must be removed and more resin injected from the bottom of the hole.

    - Air pockets (entrapped air) due to poor resin injection will also affect installation, and the stud should be removed, and more resin injected from the bottom of the hole as above.

SETTING AND CURING TIMES:

- Observe the published times of the specific FFX resin, as different formulations have different setting characteristics (www.ffx.co.uk).

- Once cured observe the recommended tightening torque, do not overtighten.

TECHNICAL AND SAFETY DATA:

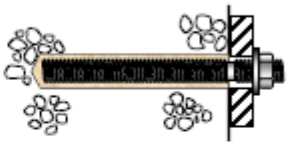
- Technical data (TDS) and safety data (MSDS) sheets are available on the web (www.ffx.co.uk) or on request from FFX

CONSTRUCTION FIXINGS association

Ensuring best fixings practice

Sample Method Statement

Resin Injection Anchors – in concrete



1 INTRODUCTION

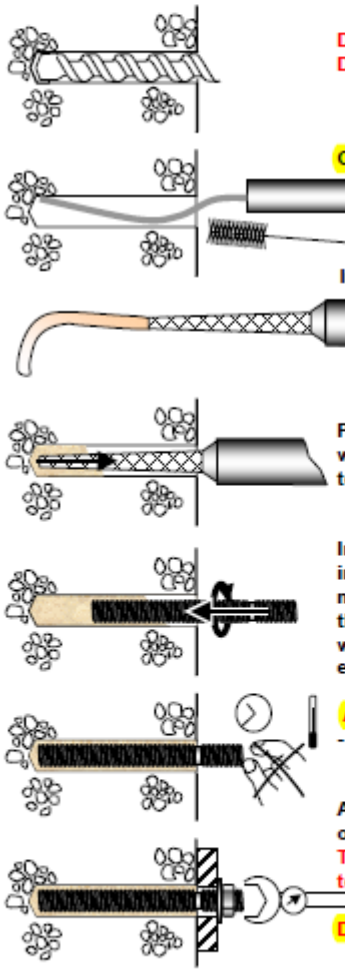
This method statement is a guide only and applies to most types of injection resin.
The manufacturer's data and installation instructions may differ and must always take precedence.

2 BASE MATERIAL SUITABILITY

Resin injection systems are ideally suited for use in masonry (covered in other method statements) and concrete although capsule systems are sometimes more suitable for safety critical applications in concrete see www.fixingscfa.co.uk - FAQs.

3 INSTALLATION

Before installation check a) that all safety equipment is to hand b) that the anchor to be used is as specified. [Only substitute another make or type if approved by the responsible engineer.] c) that the resin cartridge is in date as shown on the packaging and d) that ambient temperature is within useable range.



Drill to correct Diameter & Depth

If rebar is struck either drill a new hole (move away by least 2 x depth of aborted hole) or drill through the bar ONLY with permission Diamond drilled holes should be roughened. Fill the aborted hole with strong non-shrink grout. **Never cut the anchor rod short.**

Clean hole thoroughly by:
blowing x 3
brushing x 3
blowing x 3

Holes may also be cleaned by thorough flushing with clean water – remove excess.

Insert cartridge in dispenser & attach mixer nozzle.
Pump first two trigger pulls to waste to ensure even mixing.

IMPORTANT!

Pump resin to base of hole withdrawing nozzle slowly to avoid entrapping air.
Fill to 1/3 to ½ full.

Some excess resin after inserting the rod shows the hole is full.

Insert anchor rod by hand immediately using twisting motion to coat threads thoroughly. Adjust position within "Gel time". Wipe any excess resin from surface.

Gel time = time after injection during which the anchor rod must be inserted.

Allow "Curing time"
- depends on temperature.

Curing time = time after injection during which the anchor must be left undisturbed before it is tightened or loaded.
In damp substrates increase curing time.

Apply fixture carefully over studs.
Tighten to recommended torque,

From finger tight it will take less than one full turn to reach the recommended torque.

DO NOT OVERTIGHTEN.

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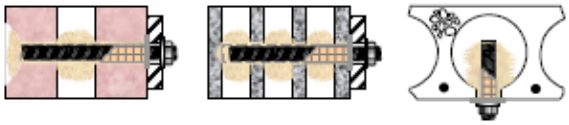
Sample Method Statement

Resin Injection Anchors – in hollow materials



1 INTRODUCTION

This method statement is a guide only and applies to most types of injection resin intended for use in hollow masonry, i.e. (brickwork and blockwork). Brickwork is used only as an example. The manufacturer's data and installation instructions may differ and must take precedence.

2 BASE MATERIAL SUITABILITY

Resin injection systems are ideal for use in hollow materials such as perforated bricks, hollow blocks and hollow core concrete beams - the perforated or mesh sleeves control the resin which bonds with substrate adjacent to it and forms an interlock in any void. For use in solid masonry see the SMS "Resin Injection Anchors - in solid masonry".

3 INSTALLATION

Before installation check a) that all safety equipment is to hand b) that the components to be used are as specified and the resin is suitable for use in solid masonry. [Only substitute another make or type if approved by the responsible engineer.] c) that the resin cartridge is in date as shown on the packaging and d) that ambient temperature is within useable range.