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
- Clean hole thoroughly by: blowing x 3
- brushing x 3
- blowing x 3
- Insert cartridge in dispenser & attach mixer nozzle.
- Pump first two trigger pulls to waste to ensure even mixing.
- Pump resin to base of hole withdrawing nozzle slowly to avoid entrapping air. Fill to 1/3 to ½ 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.
- Allow “Curing time” - depends on temperature.
- Apply fixture carefully over studs. Tighten to recommended torque, DO NOT OVERTIGHTEN.

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.

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

IMPORTANT!
Some excess resin after inserting the rod shows the hole is full.
Gel time = time after injection during which the anchor rod must be inserted.
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.

From finger tight it will take less than one full turn to reach the recommended torque.
CFA Sample Method Statement:
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Information you will need:

Cartridge specification
  Make ........................................
  Type ........................................
  Order code .................................

Anchor Rod specification
  Diameter M ......................
  Length .................................
  Finish .................................
  Grade .................................
  Order code .................................

Fixture thickness ................................................ mm
Hole diameter ................................................ mm
Embedment depth ................................................ mm
Hole depth ................................................ mm
Tightening torque ................................................ Nm

Equipment you will need:

Drilling machine SDS+
  Drill bit Diameter ...................... mm
  Working length ......................... mm

Blow out pump
Cleaning brush
Applicator gun
Mixing nozzles
Torque wrench for installation torque above
Deep reach socket Width across flats .............. mm

<table>
<thead>
<tr>
<th>Thread diameter</th>
<th>M8</th>
<th>M10</th>
<th>M12</th>
<th>M16</th>
<th>M20</th>
<th>M24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical width of nut/socket – across flats mm</td>
<td>13</td>
<td>17</td>
<td>19</td>
<td>24</td>
<td>30</td>
<td>36</td>
</tr>
</tbody>
</table>

*This Sample Method Statement is one of a series available free of charge from the Construction Fixings Association. A comprehensive Guidance Note: Resin Bonded Anchors is freely downloadable from the CFA website at www.fixingscfa.co.uk.
Installer Training. A comprehensive presentation “Anchor installation” is available on CD-Rom for a charge from the Secretary. Training courses are also available for specialist contractors to a syllabus approved by the CFA leading to certification as competent installers of anchor systems.
For more details logon and go to “Safer Installations” page.
Note: This guidance is given in good faith, however the Construction Fixings Association can accept no liability for adverse consequences arising from this guidance being followed.