

# X-Tite ResiLoc P

## General purpose pourable resin anchor grout for construction use

### Product Description

X-Tite ResiLoc P is a thixotropic polyester grout, specifically designed and developed for anchoring bolts and dowels into holes into rock, concrete, brickwork and masonry.

### Advantages

- Fast setting
- High early strength
- Resistant to a wide range of chemicals
- Vibration resistant
- Can be used in damp conditions
- Dimensionally stable
- Can be part-mixed
- Suitable for vertical and horizontal applications

### Uses

Typical applications are the permanent fixing of starter bars and dowels, foundation bolts, ground anchors, base plates for building systems, and rail and crane tracks.

### Laboratory Test Data

(Tested to BS6319, cured for 7 days at 20°C)

Property	Typical Results
<b>Compressive strength</b>	15000psi (105MPa)
<b>Tensile strength</b>	1850psi (13MPa)
<b>Flexural strength</b>	4900psi (34MPa)

### Pull Out Testing

On-site pull out testing should always be performed to determine the actual performance prior to use. The pull out value is dependent on many variables including the type and strength of the substrate, length of embedment of the bar or bolt, and temperature.

### Packaging

X-Tite ResiLoc P is supplied in 1 and 5Kg Packs.

### Shelf Life

7 months when stored at 80°F (26°C) or less in a frost-free, dry and shaded area.

### Installation Guidelines

NCC X-Calibur provides detailed method statements on all its products for use in various applications. These must be referred to prior to starting work. The information below is a summary intended for guidance only.

### Hole Preparation

Anchor bolt holes should be drilled using air or rotary percussive drilling equipment. If diamond core or non-percussive drills are used, then the sides of the hole must be thoroughly roughened.

### Recommended Hole Sizes

#### Rebar

Nominal bar dia (mm)	10	12	16	20	25	32	40
Required hole dia (mm)	12	14	20	25	32	38	48
Nominal bar dia (inch)	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{3}{8}$
Required hole dia (inch)	$\frac{7}{16}$	$\frac{9}{16}$	$\frac{11}{16}$	$\frac{7}{8}$	$1\frac{1}{8}$	$1\frac{1}{2}$	$1\frac{5}{8}$

#### All Thread Stud

Nominal stud dia (mm)	10	12	16	20	24	30
Required hole dia (mm)	12	14	18	24	28	35
Nominal stud dia (inch)	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	1	$1\frac{1}{4}$
Required hole dia (inch)	$\frac{7}{16}$	$\frac{9}{16}$	$\frac{11}{16}$	$\frac{13}{16}$	$1\frac{1}{16}$	$1\frac{3}{8}$

N.B. Hole diameters stated are nominal diameters when holes are drilled with the appropriate diameter drill bit.

### Cleaning the hole

Drilling debris and dust must be thoroughly cleaned from the hole using a stiff wire or nylon bottle brush and clean compressed air and/or clean water. If water is used the hole may be left damp, or even full of water, but the water and the sides of the hole must be clean.

### Mixing

Pour the resin component into a suitable clean mixing vessel, and while stirring slowly, add the activated filler component. Once the filler component is completely added, mix for a further one minute. A mechanical mixer such as a slow speed drill with an NCC X-Calibur approved paddle is recommended.

## Application Properties

Temperature		Pot Life (mins)	Initial Set (mins)	Service Time (hrs)
85 F	29 C	30	50	3
95 F	35 C	20	40	2
105 F	41 C	15	25	1½

\*the product can be modified for application at various ambient temperatures ranges.

Place the mixed X-Tite ResiLoc P into the drilled hole, taking care not to trap air or water. If the hole is of a particularly small diameter, or if the displacement of water is difficult, X-Tite ResiLoc P can be injected by using X-Tite applicator cartridges and injection tubing. The tube should be placed to the bottom of the hole and the resin injected through it; the tube being slowly withdrawn as the hole fills with resin. The hole should be filled to approximately half its depth, depending upon application. The fixing should be immediately pushed slowly down into the resin with a twisting action, displacing the resin up towards the top of the hole to completely fill the annular space. The bolt must then be left undisturbed until the resin has set, and the fixture can be attached once the service time has elapsed.

### Cleaning

Tools should be cleaned immediately after use, before the resin sets, using X-Shield Solvent S. Once the resin has set, it can only be removed by mechanical means.

### Load Capacity Data for All Thread Studs

Stud Diameter	Hole Depth	Characteristic Load in 40MPa (5800psi) Concrete		Recommended Load in 40MPa (5800psi) Concrete	
		$N_{RK}$ kN (lbf)		$N_{rec}$ kN (lbf)	
10 (3/8)	90 (3.5)	23.1 (5193)		7.7 (731)	
12 (1/2)	110 (4.3)	23.9 (5373)		8.0 (1749)	
16 (5/8)	125 (4.9)	36.9 (8295)		12.3 (2765)	
20 (3/4)	170 (6.7)	53.5 (12027)		17.8 (4002)	
24 (1)	210 (8.3)	66.0 (14837)		22.0 (4945)	

### Load capacity for reinforcing bar anchors

Equation for tensile load capacity (assumes  $f_{cm} \geq 20\text{MPa}$ )  
Tension  $N_{RK} = (h_{ef} - 50) / 2.5$

## Concrete capacity reduction factors

Close edge, tension:

$$Rf_{cN} = 0.4 + [0.4 C / h_{ef}] \quad 0.5 \leq [C / h_{ef}] \leq 1.5$$

Close edge, shear:

$$Rf_{cV} = 0.25 + [0.5 C / h_{ef}] \quad 0.5 \leq [C / h_{ef}] \leq 1.5$$

Close spacing, tension or shear:

$$Rf_s = 0.4 + [0.6 S / h_{ef}] \quad 0.25 \leq [S / h_{ef}] \leq 1$$

$h_{ef}$  effective bond length (rebar) (mm)

$C$  close edge distance (mm)

$S$  anchor spacing (mm)

$N_{RK}$  anchor characteristic load, tension (kN)

$N_{rec}$  anchor recommended load (kN)

$Rf_{cN}$  close edge reduction factor, tension only

$Rf_{cV}$  close edge reduction factor, shear only

$Rf_s$  close spacing reduction factor, tension and shear

## Health and Safety

**This product is for industrial use only by trained operatives. It is potentially hazardous if not used correctly. Please refer to the Material Safety Data Sheet (MSDS) prior to the purchase and use of this product. The MSDS can be obtained via our website [www.ncc.com.eg](http://www.ncc.com.eg)**

## Authorized Technical Specialist

Please note that only NCC X-Calibur Authorized Technical Specialists (ATs) are permitted to change any of the information in this data sheet or to provide written recommendations concerning the use of this product.

## Datasheet Validity

NCC X-Calibur makes modifications to its product datasheets on a continuous basis. Please check the datasheet update section on [www.ncc.com.eg](http://www.ncc.com.eg) to ensure you have the latest version.

## Warranties

NCC X-Calibur supplies products that comply with the properties shown on the current datasheets. In the unlikely event that products supplied are proved not to comply with these properties, then we will replace the non-compliant product or refund the purchase price. NCC X-Calibur does not warrant or guarantee the installation of the products as it does not have control over the installation or end use of the products. Any suspected defects must be reported to NCC X-Calibur in writing within five working days of being detected. NCC X-Calibur Construction Chemistry Inc. **makes no warranty as to merchantability or fitness for a particular purpose and this warranty is in lieu of all other warranties express or implied.** NCC X-Calibur Construction Chemistry Inc. shall not be liable for damages of any sort including remote or consequential damages, down time, or delay.