

Epoxy

## EPICHOR 1768

Patch Repairing Quick Setting Epoxy



### General Properties:

- **EPICHOR 1768** is two component solvent free, clear epoxy product.
- Can be mixed with graded sand to be used as a fixing dowels in concrete and repairing mortar.
- Is relatively insensitive to moisture.
- Has quick initial setting time.
- Has thytrotrophic effect, thus suitable for fixing steel dowels to concrete especially to soffits and vertical surfaces.
- Has high compressive, tensile & bond strength which ensures monolithic behavior with concrete.

### Uses:

- As an adhesive mortar for fixing dowels in concrete.
- As patch repair mortar for concrete.
- In machinery & rail grouts.
- For repairing & coatings of potable water tanks.

### Application:

1. Clean the holes and remove oil and grease or foreign materials.
2. Wear gloves & eye goggles before working & be sure of good ventilation.
3. Add resin **EPICHOR 1768** to hardener and mix well. Apply **EPICHOR 1768** as a primer inside the hole (the hole should be 6mm wider than the steel bar).
4. To make the mortar add resin **EPICHOR 1768** to hardener and mix well, then add the filling to the previous mixture & mix well till reaching a mortar with homogenous consistency.
5. Apply **EPICHOR 1768** mortar with the suitable tool according to usage purpose.
6. Fill 2/3 of the hole with mixed mortar, insert the steel bar in. Be sure that the bar is imbedded with enough suitable depth in the hole,
7. Failure should happen to steel before its separation from hole.
8. Clean tools using solvent ex: Thinner.

### Technical Data:

**ASTM (C - 580 Method A)** : Flexural test

Flexural strength (After 7 days)	42 N/mm <sup>2</sup>
Flexural strength (After 24 days)	67 N/mm <sup>2</sup>
Modulus of Elasticity	2320 N/mm <sup>2</sup>

**Bs-En 1881-2006** : **PULLOUT** test

1. For pure epoxy (Resin + Hardener)

Bond strength	6.7 N / mm <sup>2</sup>	Failure happened to steel bar
For rod Ø = 8mm, Imbedded length = 51mm		Failure load = 0.88 ton
The steel bar used is mild steel test done after 15 days from casting date.		

2. For Mortar epoxy (Resin + Hardener + filling)

Bond strength	9.70 N / mm <sup>2</sup>	Failure happened by yield of steel bar before pullout
• For rod Ø = 11mm, Imbedded length = 94 mm		Failure load = 3.0 ton
• Tests were carried after 7 days from casting date.		
• Concrete compressive strength 31.4 N / mm <sup>2</sup> .		
• Bond between steel and concrete is achieved by <b>Epichor 1768</b> mixed with graded special sand by thickness about 3 mm around steel bar (R+H) : filling 1 : 4		

**Tensile strength** : 2.90 N/mm<sup>2</sup> (After 7 days) ASTM (C 301)

**Compressive strength** : 54.0 N/mm<sup>2</sup> (After 7 days) ASTM (C 579 Method B)

**Initial Curing Time** : After 24 hours of mixing

**Final Curing Time** : After 7 days at ambient temperature

**Pot Life** : 20 min. at 24°C

**Density** : 2.1 gm / cm<sup>3</sup> for mortar epoxy

**Chemical Resistance** : Excellent resistance against water, alkalis, and detergents, moderate against acids; poor against organic solvents.

**Packaging** : 0.6 kg (resin + hardener)

**Shelf Life** : 18 months in closed container and away from sun light, heat and humidity.

### Environment:

- Boots, rubber gloves, dust masks, and safety goggles.
- Refer to MATERIAL SAFETY DATA SHEETS (MSDS)

END OF TECHNICAL DATA

**For more information please contact our technical department**

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