

Cicoanchor[®]1000

Epoxy Anchoring Grout

DESCRIPTION

Cicoanchor[®]1000 is a three component, solvent-free epoxy resin anchoring and bedding grout. It has been formulated using epoxy resin and graded aggregates to provide the best anchoring characteristics.

USES

- Anchoring of bolts, dowels, and steel rebars between 6-60 mm diameter in concrete, brickwork, masonry, and rock.
- Anchoring of cranes, towers, and dock sills

ADVANTAGES

- Structural anchoring product.
- Solvent-free.
- Suitable for use with dry and damp surfaces.
- Resist wastewater and most known chemicals.
- High bonding and compressive strengths.
- Good flow characteristics.
- Quick early strength development.
- Shrinkage-free curing.

STANDARDS COMPLIANCE

It complies with BS 5080

PACKAGING

1kg, 5kg, and 10 kg sets.

SHELF LIFE & STORAGE

12 months storage life if stored in its original unopened containers under a dry and shaded place in a temperature from 5°C to 40°C.

TECHNICAL PROPERTIES

Appearance	Sandy Beige Mortar
Volume solids	100%
Density @ 25°C	1.76±0.02 kg/lit
Pot life @ 25°C	35±5 min

MECHANICAL CHARACTERISTICS

Compressive Strength (ASTM C579) @ 7 days	72±1 N/mm ²
Flexural Strength (ASTM C580) @ 7 days	34±0.25 N/mm ²
Tensile Strength (ASTM C307) @ 7 days	18±0.25 N/mm ²
Adhesion to concrete (concrete failure)	>2 N/mm ²
Slant Shear Strength (ASTM C882) @ 7days	25±1 N/mm ²

APPLICATION INSTRUCTIONS

Surface Preparation

The hole surface to be anchored by Cicoanchor[®]1000 must be clean, and free from standing water and all contaminants such oil, grease, laitance, paint, or corrosion products. Any contamination should be removed by mechanical means to produce a sound substrate.

Mixing

Stir the content of component A separately, then pour the entire contents of the hardener tin into the resin container, and both should be mixed thoroughly using mid speed drill for one minute until a uniform consistency is achieved. After having the resin mixed, add component C slowly while mixing with a powerful slow speed shear mixer until a uniform consistency is achieved.

Application

Cicoanchor®1000 should be inserted into the prepared holes till approximately half depth. Then the rebar should be pushed while slightly rotated to get no trapped air. Excess material should be removed immediately and can be used again at once. If it needs further grout, it can be inserted gently by gloved fingers.

ANCHORING PARAMETERS

Hole Diameter

The hole diameter is always related to the embedded steel rebar diameter. The following equation shows that relation which shows the bigger the rebar diameter, the bigger the hole diameter, and that gives more tolerance for steel notches to be inserted easily.

Hole Depth

Hole depth depends on more than one factor:

- Concrete shear strength
- Steel rebar grade (tensile strength)
- Steel rebar diameter

Hole depth can be calculated through the following equation:

$$\text{Hole Depth (mm)} = 0.4 * f_{\text{yield}} * r^2 / f_{\text{shear}} * D_{\text{hole}}$$

Where:

- 0.4 is a constant relating to Cicoanchor®1000 mechanical characteristics.
- f_{yield} for steel (ex. = 420 MPa for steel Grade 60)
- r is steel rebar radius in mm
- f_{shear} is concrete shear stress as per BS 8110 in N/mm² (ex. 3.1 for Fc 35 MPa)
- D_{hole} is hole diameter in mm (= steel diameter + 4 for rebars from 6-16 and steel diameter / 6 for rebars from 18-32 and steel diameter / 8 for rebars >32)

CLEANING

Tools contaminated with Cicoanchor®1000 can be cleaned using Cicosolvent®. Hardened grout can only be removed by light mechanical means.

LIMITATIONS

Cicoanchor®1000 should not be loaded before 24 hours of anchoring to have the safest results.

PRECAUTIONS

Health And Safety

Cicoanchor®1000 is non-hazardous. However, it should not be swallowed or allowed to come into contact with skin or eyes. Suitable protective goggles should be worn. Splashes on the skin should be removed with water. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. If swallowed, seek medical attention immediately. Do not induce vomiting.

TECHNICAL SUPPORT

CIC provides on-site assistance and consulting services on projects when requested. Technical data sheets on other CIC products and guidance on their use are available on request.



Warranty

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