



BONDCRETE EP

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Moisture-Tolerant Structural Epoxy Bonding Agent

Product Description:

HYDROBLOC Bondcrete EP is a premium, two-component, solvent-free, moisture-tolerant structural epoxy bonding agent designed to provide exceptional adhesion between hardened concrete and fresh cementitious repair mortars, screeds, and concrete. Its moisture-tolerant curing technology and graded silica filler system provide a brush-able, non-sag consistency suitable for horizontal, vertical, and overhead applications. It develops excellent adhesion to damp concrete and reinforcing steel while providing high mechanical strength, durability, and resistance to water and aggressive environmental conditions.

Key Features & Benefits:

- Two-component, 100% solids structural epoxy
- Moisture-tolerant formulation for dry and damp concrete
- Excellent adhesion to concrete and reinforcing steel
- High bond, compressive, tensile, and flexural strength
- Non-sag consistency for vertical and overhead applications
- Excellent resistance to water penetration
- Excellent chemical, chloride, and sulphate resistance
- Low shrinkage and excellent abrasion resistance
- Long open time and good workability
- Solvent-free with nil VOC
- Compatible with cementitious repair mortars
- Suitable as a protective primer for exposed reinforcement

Areas Of Application:

- Structural concrete repairs
- Bonding fresh to hardened concrete
- Bonding polymer-modified repair mortars
- Bridge deck and precast concrete repairs
- Concrete jacketing
- Beam and column strengthening
- Industrial floor repairs
- Marine and water-retaining structures
- Sewer structures
- Concrete overlays
- Structural grouting interfaces
- Repair of damaged concrete
- Foundations and basements
- Columns, beams and slabs
- Water treatment plants
- Concrete tanks



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Surface Preparation:

Concrete

The substrate must be structurally sound, clean, and free from laitance, dust, oil, grease, curing compounds, loose particles, and other contaminants that may impair adhesion.

Surface preparation should preferably be carried out by grit blasting, mechanical grinding, scarifying, or high-pressure water jetting followed by drying to an SSD condition. A roughened, open-textured surface is recommended.

Reinforcing Steel

Remove rust, scale, and contaminants from exposed reinforcement by abrasive blasting to **SA 2½** or mechanical cleaning to **ST 3**. Steel must be dry and free from loose corrosion products before application.

Mixing Instructions:

- Pre-stir Part A and add the complete contents of Part B into Part A
- Mixing ratio: 2 Parts A : 1 Part B by weight
- Mix using a slow-speed electric drill at 300–500 rpm
- Use a suitable paddle mixer
- Mix for approximately 3 minutes
- Continue mixing until a uniform color and consistency are achieved
- Avoid excessive air entrapment
- Do not mix partial quantities unless accurately weighed

Application Guidelines:

- Apply Hydrobloc Bondcrete EP using a stiff nylon brush, short-nap roller, or rubber squeegee where appropriate.
- Apply a continuous, uniform coat over the prepared substrate, ensuring complete wetting of the surface.
- Typical application thickness: 250–500 microns
- Fresh repair mortar or concrete must be placed while Hydrobloc Bondcrete EP remains tacky. If the epoxy has fully cured before placement, lightly roughen the surface and apply a fresh coat before continuing.
- When used as a protective primer for exposed reinforcement, ensure complete coverage around the steel and allow the primer to become tack-free before applying the repair mortar.
- Substrate temperature: +10°C to +45°C
- Ambient temperature: +10°C to +45°C
- Relative humidity: Maximum 85%



HYDROBLOC

BUILT ON PERFORMANCE

BONDCRETE EP

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Coverage/ Consumption:

Approx. 0.40–0.70 kg/m²

Actual consumption will depend on substrate profile, porosity, and surface roughness.

Typical applied thickness: 250–500 microns

Curing & Protection:

Initial cure: 6–8 hours

Pot life at 25°C: 35–40 minutes

Full cure: 7 days

Pot life at 35°C: 20–25 minutes

Protect freshly applied material from rain until initial cure. Do not exceed the recommended pot life. Repair mortar or concrete must be placed while the bonding coat remains tacky.

Packaging:

HYDROBLOC Bondcrete EP comes in sets of 3kg and 9kg.

Storage & Shelf life:

Store for up to 12 months in unopened packaging. Keep in cool, dry conditions away from frost and moisture and direct sunlight. Recommended storage temperature: 10°C–35°C

Health & Safety:

Avoid contact with skin and eyes. Wear suitable protective gloves, safety glasses, and protective clothing during handling and application. Wash hands thoroughly after use. Refer to the relevant Safety Data Sheet before use.

Do not dilute with solvents and do not apply over standing water. Cured material can only be removed mechanically.



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Technical Data:

Property	Value
Type	Two-component structural epoxy bonding agent
Mixed Color	Brown
Solids Content	100%
VOC	Nil
Mixing Ratio	2A : 1B by weight
Specific Gravity	Approx. 1.65–1.75 kg/L
Pull-off Adhesion to Concrete	>3.0 MPa — concrete failure expected
Slant Shear Bond Strength	>18 MPa
Tensile Strength	>35 MPa
Compressive Strength	>75 MPa
Flexural Strength	>30 MPa
Shore D Hardness	80–85
Water Absorption	Very Low
Moisture Tolerance	Excellent
Chloride Resistance	Excellent
Sulphate Resistance	Excellent
Chemical Resistance	Excellent against dilute acids, alkalis and salts
Vertical Sag Resistance	Excellent
Application Thickness	250–500 microns
Application Temperature	+10°C to +45°C
Maximum Relative Humidity	85%