

Product Data Sheet

CasTech Bond EP

Nov-2025, Ver. 01.01



Epoxy Bonding Agent

DESCRIPTION

CasTech Bond EP is a two-component, solvent-free epoxy bonding agent and adhesive for bonding new concrete, render, screeds, and repair mortars to existing concrete. It is suitable for internal and external use and develops a non-shrink, high-strength bond.

The product is moisture tolerant and may be applied to properly prepared, slightly damp or saturated-surface-dry substrates.

TYPICAL USES

- Bonding new concrete, screeds, renders, and repair mortars to existing concrete
- Bonding bricks, copings, ceramic or glazed tiles, and slabs
- General concrete repairs, pile-cap protection, and abrasion-resistant linings
- External rendering, waterproofing works, and marine or offshore structures

ADVANTAGES

Key advantages:

- High bond strength and tenacious adhesive properties
- Solvent-free, non-shrink, and moisture-tolerant formulation
- Improved abrasion resistance and good chemical resistance
- Suitable for hot climatic conditions and external applications
- Durable, non-corrosive, and compatible with Portland-cement systems

COMPATIBILITY

CasTech Bond EP is compatible with Portland-cement-based concrete, mortars, renders, and screeds, and with properly prepared brick, ceramic tile, glazed tile, and abraded glass surfaces. Complete a trial where the substrate or service conditions are unusual.

TYPICAL PROPERTIES

Appearance	Off-white liquid
System	Two-component solvent-free epoxy bonding agent
Density at 25°C	1.30 g/cc
Bond strength	>30 N/mm ² - ASTM C882
Compressive strength	>50 N/mm ²
Tensile strength	>18 N/mm ²
Water absorption	<0.04% - ASTM D570
Chloride content	Nil
Application method	Short-haired brush or trowel
Typical coverage	3-5 m ² /L
Substrate condition	Slightly damp / saturated-surface-dry
Full cure	7 days
Shelf life	12 months
Number of components	Two
Available kit sizes	1 L and 5 L
Mixing time	Approximately 3 minutes

Typical values are subject to approximately 5–10% tolerance and may vary with test conditions, substrate, and application.

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

General requirements

Surfaces shall be clean, sound, and free from oil, grease, cement laitance, curing compounds, paint, bitumen, and loose particles. Remove all contamination by suitable mechanical means. Chip weak or disintegrated concrete back to a sound substrate. New concrete shall be adequately cured so that shrinkage and moisture movement are low.

Damp condition

Concrete shall be brought to a saturated-surface-dry condition before application. Slightly damp surfaces are acceptable, but all standing water shall be removed.

Glass and smooth surfaces

Abrade glass and other smooth substrates to provide a mechanical key, then clean thoroughly before applying **CasTech Bond EP**.

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MIXING

Pour Component B (hardener) into Component A (resin). Mix thoroughly for approximately 3 minutes with a slow-speed electric mixer and suitable paddle until a uniform color and consistency are achieved.

Scrape the sides and bottom of the container during mixing to ensure complete incorporation of both components.

Mix complete units only. Do not dilute or thin **CasTech Bond EP** and do not add any other material.

APPLICATION

Apply **CasTech Bond EP** evenly to the prepared substrate using a short-haired brush or trowel. Work the material thoroughly into the surface to obtain continuous coverage.

Placement of subsequent material

Place the new concrete, screed, render, or repair mortar immediately after application of **CasTech Bond EP** to avoid dust or other contamination of the bonding layer.

Vertical and detailed areas

Ensure full and even coverage at edges, corners, around reinforcement, and on irregular surfaces. Do not leave untreated areas.

Special applications

For marine, offshore, waterproofing, or chemically exposed applications, confirm the complete system and the approved method statement with CasTech Technical Support.

CLEANING

Clean tools immediately after use with xylene or another suitable solvent. Hardened material can only be removed mechanically.

COVERAGE

Typical coverage is 3–5 m²/L. Actual consumption will vary with substrate texture, porosity, condition, and application method.

LIMITATIONS

- Do not apply over oil, grease, laitance, curing compounds, paint, bitumen, dust, or loose material.
- Do not apply where standing or running water is present.

- Do not dilute or thin the product with solvent or other materials.
- Mix complete units only and ensure a uniform colour and consistency.
- Place the subsequent concrete or mortar immediately after application to avoid contamination.
- Abrade glass and other smooth or glazed surfaces before application.

STORAGE

Store unopened containers in a cool, dry place, preferably at 18–28 °C. Protect from direct sunlight, moisture, and excessive heat. Reseal containers after use.

PACKAGING

CasTech Bond EP is supplied as pre-proportioned two-component kits in:

- 1 L kit
- 5 L kit

SHELF LIFE

Up to 12 months from the date of manufacture in unopened, original containers under the recommended storage conditions.

HEALTH AND SAFETY

Wear suitable protective clothing, safety goggles, chemical-resistant gloves, safety footwear, and a suitable face mask during mixing and application. Avoid contact with skin and eyes and maintain good ventilation.

If the product contacts the skin, wash immediately with soap and plenty of clean water. In case of eye contact, rinse immediately with clean water and seek medical attention. If swallowed, do not induce vomiting; obtain medical assistance immediately.

Refer to the latest Safety Data Sheet for detailed handling, first-aid, transport, and disposal information.

TECHNICAL SUPPORT

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

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