

MONOBOND EP5



Epoxy bonding agent for concrete

DESCRIPTION

MONOBOND EP5 is a slow cure, solvent-free epoxy resin bonding agent that is supplied in pre-weighted two component packs which when mixed together produce a medium viscosity epoxy adhesive.

MONOBOND EP5 can be easily spread over old concrete or cementitious substrates to permanently bond freshly casted concrete or new mortars.

APPLICATION

MONOBOND EP5 is a permanent epoxy adhesive for bonding fresh wet concrete/cementitious material to old concrete/ cementitious surfaces, which is suitable for internal and external application.

ADVANTAGES

- High bond strength.
- Moisture tolerant; can be applied to damp surfaces.
- Slow cure, allows more time for subsequent works such as fixing steel reinforcements and erecting shutter.
- High strength.

METHOD OF USE

SUBSTRATE PREPARATION

MONOBOND EP5 The Substrate should be sound, clean and free from contamination. Surface laitance should be removed by acid etching or light grit blasting.

Oil, grease, and fat deposit should be removed by using either appropriate degreaser or steam cleaning. Weak or deteriorated concrete should be removed by scabbling, chipping or grit blasting.

MIXING

The base and the hardener should be mixed separately before mixing together to disperse any settlement.

Carefully transfer the entire contents of the hardener container into the base component container and thoroughly mix using slow speed drill with appropriate mixing paddle for 3 minutes until uniformity is obtained. Do not attempt to mix partially nor add any thinning materials.

TECHNICAL PROPERTIES

Colour: Green for mixed material
Mixed density: 1.4 ± 0.1 g/cm³ Compressive ≥ 50 MPa @7 days

yield strength:

ASTM D695

Bond strength by slant shear: ≥ 10 MPa @ 14 days moist cure (old/new concrete) ASTM C882

Water absorption: $< 0.2\%$

ASTM D570

Full cure: 7 days @ 25°C, 5 days @ 40°C

Typical minimum: 2 hrs @ 25°C

Overlay time: 1 hr @ 40°C

Typical maximum: 9 hrs @ 25°C

Overlay time: 5 hrs @ 40°C

Gel time: 6 hrs @ 25 °C

ASTM C881

Viscosity: 40 ± 10 poise @ 25°C

ASTM D2393 (medium viscosity)

VOC: ASTM D2369 < 50 g/ltr

(comply with LEED)

Minimum and maximum overlaying times depend on the ambient weathering conditions. In general the new concrete/cementitious material should be only applied over tacky layer of Monobond ep5.

Monobond ep5 is designed to have an overlaying time of 9 hours at 25 °C and 5 hours at 40 °C.

This should allow for subsequent works such as steel reinforcement fixation and shutter erection.

APPLICATION

MONOBOND EP5 should be applied immediately after mixing using a short haired paint brush. The material should be painted evenly across the whole surface and left until it becomes tacky (typically 2 hours at 25 °C and 1 hour at 40 °C) before the new concrete, screed or mortar is placed.

Care should be taken to apply the new concrete, screed or mortar within the overlay time specified in Technical Properties.

Failure to do so will have an adverse result and the material will form a de-bonding plane rather than a bonding coat.

Minimum application temperature is 5°C while temperatures exceeding 35°C will decrease pot life and setting time.

NOTES

- If temperature of the material is less than 12°C, it is needed to elevate their temperature to 25°C before the application.
- And if the ambient and the substrate temperature is less than 5°C, don't use the material.
- Also, at high temperatures (35°C and above), cooling the material is needed before the application. And try not to make the application in the middle of the day or under direct sunlight.

CLEANING

All tools should be cleaned immediately after finishing by STARKE solvent. Hardened materials should be cleaned mechanically.

PACKAGING

MONOBOND EP5 is available in 1 kg (0.7 litre) and 5 kg packs (3.6 litre).

COVERAGE

2.5 - 3.0 m²/kg.

STORAGE

MONOBOND EP5 has a shelf life of 18 months from date of manufacture if stored at temperatures between 15°C and 30°C.

If these conditions are exceeded, STARKE Technical Department should be contacted for advice.

CAUTIONS

Health and Safety

MONOBOND EP5 should not come in contact with skin or eyes. Rubber gloves and eye protection should be worn all the time. The use of barrier cream is recommended on exposed areas of the skin. In case of contact with eye, rinse with clean water and seek medical consultation.

For further information refer to the Material Safety Data Sheet.

FIRE

MONOBOND EP5 is nonflammable.

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- **Surface treatments**
- **Grouts and anchors.**
- **Concrete repair.**
- **Flooring Coating**
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- **Waterproofing.**
- **Adhesives.**



Important note :

Starke range products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Starke endeavours to ensure that any advice, recommendation specification or information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products whether or not in accordance with any advice, specification, recommendation, opinion or information given by it.

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