



NanoBond EP

Epoxy base concrete bonding agent and steel corrosion protection

Description

NanoBond EP is a epoxy resin for bonding old to new concrete. It is supplied as a two-part material in pre-weighed quantities ready for onsite mixing and use.

Uses

- For bonding new cementitious materials to existing cementitious surfaces.
- For use on horizontal surfaces and on vertical surfaces where mortar or concrete can be supported by form work.
- Ideal for extensions and repairs to concrete in factories, loading bays, trucking aisles, bridges & roads.
- Thin section screeds especially for bridge decks, highways, parking decks and industrial floors.
- Corrosion protection of steel and silage pit lining and protection.

Features / benefits

- Can be applied to dry or damp surfaces
- High mechanical strength
- Good positive adhesion
- Can be applied where a substrate/repair barrier is required
- Standard and slow set grades

Properties

	Standard	Slow set
Pot life @ 20°C:	35 to 45 minutes	5 to 6 hours
Initial hardness:	24 hours	48 hours
Full cure:	7 days	7 days
Maximum overlay time @ 20°C	90 minutes	24 hours
Minimum application Temperature:	5°C	5°C

The following results were obtained at a temperature of 20°C @ 7 days.

Compressive strength	50 N/mm ² (BS 6319, Pt. 2)
Flexural strength	35 N/mm ² (BS 6319, Pt. 3)
Tensile strength	20 N/mm ² (BS 6319, Pt. 7)
Slant shear bond	25 N/mm ² (BS 6319, Pt. 4)
Adhesive strength	> 3 N/mm ² (concrete failure)

Packaging

2.5 kg & 3.0 kg pack .

Storage

Store in a dry and cool place below 35°C. Protect from direct sunlight.

Shelf Life

2 years in original, unopened packaging.

Directions for use

Surface preparation for bond coat:

The substrate must be free from oil, grease, existing sealers or other contaminants. All loose material should be removed. Expose fully any corroded steel and remove all loose scale and corrosion deposits. Steel should be cleaned to a bright condition paying particular attention to the back of exposed steel bars. Grit-blasting is recommended for this process.

Mixing:

The contents of the base and hardener cans should be stirred thoroughly to disperse any settlement. The entire contents of the hardener can should be added to the base container and mixed thoroughly for at least 3 minutes until a uniform colour is obtained, taking particular care to scrape the sides and bottom of the container. It is recommended that mechanical mixing be employed, using a Jiffy mixer on a heavy duty, slow speed electric drill. To facilitate application at temperatures below 10°C the separate components should be warmed in hot water to a maximum of 25°C before mixing. However, the mixed material will need to be used speedily as the pot life of the standard grade will be reduced to 20 minutes. Alternatively the materials should be stored in a heated building and only removed immediately before use.



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Application:

The thoroughly mixed material should be applied with a suitable stiff nylon-type brush and must be firmly scrubbed into the surface, ensuring an even coating. The new concrete or screed should be applied to NanoBond EP standard within 1½ hours at 20°C, or within 1 hour at 30°C and NanoBond EP slow set within 24 hours at 20°C, or within 8 hours at 30°C. Apply a NanoBond EP standard and leave for 30 minutes before the overlay is applied to the tacky surface. Alternatively NanoBond EP slow set can be used to allow for application prior to the fixing of shuttering or reinforcement. The concrete, or screed can then be placed up to 24 hours after the application of NanoBond EP slow set. However, it should be left for 1 hour before the overlay is applied to the tacky surface.

Coverage: 0.3-0.5kg/m²

Cleaning & disposal

Tools and application equipment should be cleaned using NanoSolvent. Cured material can only be removed mechanically. Spillages should be absorbed with sand or sawdust and disposed of in accordance with local regulations.

Precautions & Limitations

To eliminate risk of exotherm, this product should only be mixed when ready for use and then applied without delay. Any unused residue should be poured on to a disposable impervious surface to allow cure before disposal. NanoBond EP is non-flammable.

Health & safety

NanoBond EP is capable of irritating unprotected sensitive skin, we therefore recommend the use of a suitable barrier cream and the wearing of gloves and goggles.