

# SmartBond AN

## Acrylic Bonding Agent & Polymer Liquid Additive

Email: fengfu@ffpte.com

**SmartBond AN** is a single component, milky emulsion consisting of modified acrylic type resin and is used as a bonding agent. As part of a complete concrete repair system, **SmartBond AN** is excellent for both internal and external applications. **SmartBond AN** can also be used as a liquid additive for cement mixes to enhance the physical properties and allow for better workability and resistance to weather conditions.



### FIELDS OF APPLICATION

- Overhead and vertical repairs
- Primers for concrete repair system
- Flooring with higher resistance to wear
- Mechanical key for rendering on dense, strong or smooth substrates such as concrete.

### BENEFITS

- Easy application
- Good bond strength
- Cost effective
- Long open time
- Can be used as a curing membrane
- Can be used as an additive for cementitious mixes

### TECHNICAL DATA (under laboratory conditions)

PROPERTY	TYPICAL RESULTS
Solids Content	> 25%
Slant Shear Bond Strength @ 28 days	≥ 2.0 N/mm <sup>2</sup>
Tensile Adhesion Bond Strength @ 28 days	≥ 1.5 N/mm <sup>2</sup>
Coverage (Bonding Agent)	6–8 m <sup>2</sup> /litre

- Sand - 0.3mm to 2.36mm dry graded sand.
- Mix designs are proposed as guide and results obtained are typical values. Results may vary using different cement and sand.

### SURFACE PREPARATION

- Remove all loose and unsound concrete by hacking and expose the entire surface of corroded reinforcing steel.
- For all repair areas, a 10mm saw cut is recommended to avoid "feather edging" of the repair mortar.
- All fine, loose debris may be removed with oil free compressed air.

### MIXING

#### Bonding Agent

- **SmartBond AN** is applied directly from the container. No dilution with water or solvents necessary.

#### Bonding Slurry

- Mix 1 ½ to 2 parts cement with 1 part of **SmartBond AN** inside a clean container.
- Stir with mechanical slow speed power drill attached with a paddle or by hand until a smooth, lump-free consistency is achieved.

#### Spatter Dash Key Coat

- Mix equal parts of **SmartBond AN** with water until a slurry consistency is obtained.
- For the dry mix, it is recommended to mix 2 parts of course sand to 1 part of Ordinary Portland Cement.

#### Patching and Repair Mortar

- Mix equal parts of **SmartBond AN** with water until a slurry consistency is obtained.
- For the dry mix, it is recommended to mix 3 parts of sharp sand to 1 part of Ordinary Portland Cement.
- For larger areas, it is recommended to use a forced action mixer with a rotating drum or pan. Add the mixed liquid into the dry mix mortar until a smooth and consistent paste is achieved.
- Small quantities can be mixed by hand. Ensure not to overmix.

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## PLACING

### Bonding Agent

- Pre-wet the substrate before the application of **SmartBond AN**.

### Bonding Slurry

- Application should only be done on clean and sound substrates that has been pre-dampened. No ponding water should be present. Soak up any ponding water with a sponge prior to application of the slurry. Use a stiff brush or broom to apply the bonding slurry and never allow the slurry to dry out during application. Apply the mortar / concrete while the slurry is still tacky to ensure the best bond.

### Spatter Dash Key Coat

- It is recommended to use a stiff broom for the best results.
- Use a brush or broom to apply the slurry onto the pre-dampened substrate.
- Ensure that all pores or voids are filled with the mix.
- Allow the key coat to harden for at least 24 hours prior to rendering.

### Patching and Repair Mortar

- Apply the bonding slurry as described in the "Bonding Slurry" section above.
- Any areas with rebar must also be covered with the slurry. Do not allow the slurry to dry out during application.
- Ensure that the repair mortar is firmly pushed into place and compacted with a trowel or float for best results.
- For vertical application the recommended application thickness per layer is 10 – 25 mm.
- For overhead application the recommended application thickness per layer is 10 – 15 mm.

### Curing Aid

- Apply **SmartBond AN** to concrete or mortar surface as soon as finishing operations are completed.
- **SmartBond AN** is applied by a brush. It is important to ensure that a continuous film is applied.

## PRECAUTIONS

- Avoid eye and skin contact as the product is alkaline.
- Gloves, goggles and dust mask should be worn.
- Wash thoroughly after handling.
- In case eye contact, flush with plenty of clean water. Seek medical help immediately.

## PACKAGING & STORAGE

**SmartBond AN** is supplied in 20 litre containers and has shelf life of 12 months if stored in a cool and dry place in sealed packaging with sheltered protection from rain and sunlight.

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