

SmartFlex

2 Part Flexible Cementitious Waterproofing Membrane

SmartFlex is a two-component, flexible cementitious waterproofing membrane. It is reinforced with specially selected and graded fine quartz sand. When blended, **SmartFlex** forms a flexible matrix of polymer and hydrate structures. This provides a breathable membrane which allows water vapour transmission but is impermeable to liquid water. **SmartFlex** is easily applied as a slurry onto horizontal and vertical surfaces. No priming is needed as **SmartFlex** has good substrate adhesion.



FIELDS OF APPLICATION

- Bathrooms, Toilets and Kitchens
- Balconies and Planter boxes
- Swimming pools
- Water Tanks (Complies SS 375)
- Environmental Decks
- Basements walls

BENEFITS

- Can be applied on damp surfaces
- Cracks-bridging ability
- Good substrate adhesion
- Non-toxic (Ideal for confined areas)
- Flexible and cementitious
- Easy to apply

TECHNICAL DATA (under laboratory conditions)

SmartFlex consists of :

- Part A - Grey Powder
- Part B - Milky Viscous Liquid

PROPERTY	TYPICAL RESULTS
Adhesion to concrete - after 28 days curing (ASTM D4541)	≥ 0.3 N/mm ²
Crack Bridging (ASTM C836)	1.) No crack at 2 mm width 2.) No crack after 10 cycles of stretching and closing to a width of 1 mm
Hardness (shore A) - after 7 days curing (ASTM D2240)	≥ 40
Tensile Strength (ASTM D412)	≥ 1.5 N/mm ²
Elongation at break (ASTM D412)	≥ 150%
Resistance to Water Penetration - 0.2 kg/cm ² for 12 hours (DIN 1048: Part 5)	0 mm
Chloride Content (ISEA Method)	< 0.1%
Pot Life	60 minutes
Touch Dry set-to-touch (ASTM D 1640)	Approximately 2 hours depending on temperature & humidity
Toxicity (SS375)	Pass
Ponding Test	24 hours after application

* Drying times may vary depending on the surrounding temperature and humidity

SURFACE PREPARATION

- All concrete substrates must be cleaned to remove contaminants such as oil, grease, dust, laitance, etc.
- Any sharp or uneven surfaces must be leveled by hacking and / or topping of the substrate with SmartNS Grout GP or a suitable repair mortar.
- Similarly, weak and porous substrates must be made sound by hacking and screeding. If a porous substrate is of acceptable strength, an additional layer of **SmartFlex** can be used as a priming coat before the actual application.
- Pre-saturate all substrates with water prior to application. Do not allow ponding of water; use a sponge to soak up excess ponding water.
- All wall / floor joint, pipe penetration must use a mortar fillet to reduce angle of turn.

MIXING

- Mix up the liquid component (Part B) by shaking or turning the container.
- Pour the liquid into a clean container. Stir with a variable speed planetary paddle mixer. Use low speed for stirring and avoid foam formation.
- Pour the powder (Part A) slowly into Part B in the container with the mixer on high speed. Avoid lump formation during mixing and move the mixer head up & down the container.
- Mix until a homogeneous slurry is obtained. Check for any unmixed powder at bottom of the container.

DISCLAIMER

All information was prepared carefully, using current references available to us. Information provided is to the best of our knowledge and belief, accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself/ herself as to the suitability and completeness of information provided here for their intended use. We do not accept liability for any loss or damage that may occur from the use of this information.

PLACING

- Mortar fillets should be installed at all wall / floor joints before **SmartFlex** application.
- A roller or a broad, soft brush may be used to apply the **SmartFlex** slurry on horizontal and vertical surfaces.
- A paint brush should be used in corners and narrow spaces.
- At least 2 layers of **SmartFlex** must be applied. The layers should be applied in cross direction to each other.
- Allow sufficient time for the 1st coat of SmartFlex to dry thoroughly before proceeding to apply the 2nd coat. Which is approximately 2 - 3 hours depending on film thickness.
- A layer of protective screed is to be laid after allowing SmartFlex to cure for at least 72 hours.
- Always apply **SmartFlex** on the positive side of the structure i.e. on the side where hydrostatic pressure is anticipated.

CURING & TREATMENT

- Where rain is expected after the application, the **SmartFlex** membrane must be protected with polyethylene sheet for 12 hours.
- Avoid applying **SmartFlex** under strong sunlight. Do not apply **SmartFlex** on hot substrates.
- Soft rubber soles (or barefoot) is recommended for walking on the dried **SmartFlex** surface.
- After **SmartFlex** has cured thoroughly, a protective screed must be installed quickly to protect the membrane from damage.

COVERAGE / YIELD

For a 2-coat application, the quantity of **SmartFlex** required is 2.0 - 2.5 kg per m². When properly mixed : Each 36 kg set will yield 21.6 litres; Each 12 kg set will yield 5.4 litres of **SmartFlex** slurry.

PRECAUTIONS

- Each full set of **SmartFlex** must be mixed in the proportions supplied. Mixing in quantities smaller than one set may lead to wrong proportioning and affect the product's performance.
- Dilutions and addition of other materials will also affect the product performance.
- All tools and equipment should be cleaned with water immediately after use. Any hardened material can be scraped off with tools or softened by soaking in thinner.
- Avoid eye and skin contact as the product is alkaline.
- Gloves, goggles and dust mask should be worn.
- Avoid inhalation of dust during mixing.
- Wash thoroughly after handling.
- In case of eye contact, flush with plenty of water. Seek medical help immediately.

PACKAGING & STORAGE

SmartFlex is supplied in sets of:

36 kg set

- 20 kg bag Part A (Powder)
- 16 litres container Part B (Liquid)

12 kg set

- 7 kg bag Part A (Powder)
- 5 litres container Part B (Liquid)

SmartFlex has a shelf life of 12 months if stored in a cool and dry place in sealed packing with sheltered protection from rain and sunlight.

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