

FF MICROCEMENT Application Method

Preparation

1. Surface preparation

The concrete base or other floor bases must be clean, free of dust and grease. The base must be consistent, without loose particles and disaggregation. The foundation should have a minimum tensile strength of 1.5 MPa. The base must be visually dry. Cracks in the base should be repaired. Weak bases, which cannot sustain the contraction of coating must be removed or restored. The foundation should be ground or blasted and then aspirated. Use appropriate FreeForm primer, depending on the nature of the substrate- i.e, whether it is loose, absorbent, non absorbent or displaying signs of humidity. After application of primer and drying, the surface should be vacuumed to remove loose sand particles.

Humidity of the surface should not be higher than 4% and may need to be checked by testing. Concrete substrates should be first properly prepared by mechanical polishing in order to obtain a uniform absorbent substrate with open porosity without protruding edges. If levelling is required, it is recommended to use FF Screed or Self Levelling Underlayment with controlled shrinkage and drying for preparing an appropriate base.

Where required, adequate waterproofing of the substrate must be adequately carried out.

Levels: It is extremely important that the base is well levelled and within strict tolerances. This is important as level variations in base can easily lead to failures in topping materials. Further a well levelled floor will help to save costs in material consumption of subsequent layers.

Use of FF Dry Screed or FF Self-levelling underlayments can help to this end.

2. Recommended primers

FreeForm Primer C or other suitable FreeForm Primers, depending on the condition of the substrate on which the material is applied.

3. Installation tools

- Concrete Mixers- Pan or Drum Type - Horizontal or Vertical- Mixer must be clean and not cause contamination of the mixture.
- Hand Trowel
- Wheelbarrow or dumper to transport material
- Small jobs can be carried out with electrically operated mechanical hand mixers in suitable plastic pails.

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Work area preparation/Setting up

1. Mixing

- In the bucket containing the powder, empty the Latex (liquid component) and the pigments in liquid form according to the desired. According to the required workability for every 1kg of the Latex (liquid component), 1 - 1,5L of clean water must be added. This water is used to clean the recipients of both the Latex (liquid component) and the liquid pigment. It is important to be particular and wash all the latex and the pigment to ensure the uniform colour between different buckets mixes. Once mixing rate is established make sure it is always the same.
- Mix by means of an electrical stirrer for at least 3 minutes until a uniform mix free of lumps is obtained. Wait for 5 minutes and then remix before use. The mix has to be used within 30 minutes after mixing in normal conditions. Never add additional water to restore workability of the mix.

2. Recommended application thickness

2- 3 coats of 1.5 to 0.5 mm giving a total of 2-3 mm thickness are recommended. So for that reason the base must be very accurately finished prior to starting the work for laying the FF MicroCement floor/wall. For floors it is suggested to incorporate a glass fibre mesh to obtain a 2 mm thickness for the base coat.

3. Laying/Pouring/Installation

- On horizontal surfaces apply the first coat by means of a notched trowel 6mm x 6mm. Incorporate inside the fresh mortar, a FF AR Fibreglass net. For vertical surfaces too, the net may be incorporated to ensure proper thickness of the base coat- which ideally should not be less than 1.5 mm.
- Expansion joints are recommended in internal areas at every 7 - 10 linear meters and in external areas at every 5 - 7 linear meters.
- A diluted acrylic Primer should be used between coats. The base surface may be lightly sanded at this point to obtain a smoother surface for the final coat.
- Subsequent coats are applied after a minimum of 6-8 hours after sufficient drying has taken place, and must be finished off well.
- Suitable sealing and protection according to desired finish or application is required after the completion of the above steps.

4. Curing

In normal conditions, FF MICROCEMENT cures in 24 hours. If temperature is lower curing will take longer. The material cures without being covered and the material should not be touched

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during the curing. Touching the material with a trowel after that it has started to settle may cause separation and cracking in the material.

Protect the floor from staining, damage, etc., as a result of other agencies working on site. Wet wood shaving, oil and varnish stains cannot be removed. After initial curing of 3-5 days, cover adequately if there is a time gap till the grinding/polishing operation. To avoid scratches, all furniture, ladders etc should be lifted, or dragged on a thick cloth.

5. Precautions

- Avoid application under direct sunlight and/or strong drying wind or rain
- Do not add water in quantity higher than the recommended and do not add water when the mixture starts to set
- Do not cover or apply the product over existing expansion joints of the substrate
- Do not apply the coating on substrates with rising damp or in total water immersion without substrate waterproofing
- Do not add cement, gypsum, lime or other substances which might influence the properties of the mortar.
- Do not apply the coating on substrates and/or areas with temperature less than +5°C or higher than +35°C
- Do not apply directly over anhydrite screeds, metal or flexible substrates with high deformability and intense vibration.
- Application should be performed by professional

6. Grinding/Grouting/Polishing/Densification

A brushed finish can be imparted on the finished surface before carrying out the sealing. An expert or experienced agency is necessary for the work.

7. Protection/Sealing

- Clean the surface well with a scrubber dryer with a cleaning pad.
- Make sure that the scrubber dryer is in good condition.
- When the surface is fully dry, it is ready to receive the sealer.
- Mix the approved sealer and apply it on the prepared surface.
- Use a low pressure sprayer to apply the sealer evenly. Check with trials in a small patch before applying on the entire surface.
- The surface can be sealed with impregnation (invisible) or shiny or matt sealers as desired by the designer or client.

8. Cleaning and maintenance

Clean with PH neutral cleaning agent. Never use acids or very strong cleaners.

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FREEFORM

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