

# VICAREP-F®

Edition 07022

High performance, Polymer Fibers reinforced, Non-shrink, Leveling & Repair mortar.

## Description

**Vicarep-F** is a high performance, one component, Non-shrink cementitious leveling & repair mortar based on VICAT's Prompt Cement, graded fillers, rheology adjustors as well as micro fine polymer fibers. The mix contains no chlorides, ferrous metal or other deleterious materials. The product is pre-blended and ready for mixing on site to produce a non-shrink, easy to apply, homogenous mortar which hardens to a strong repair mortar as well as a leveling base ready to receive toppings, linings, tiles, waterproofing membranes...etc. **Vicarep-F** may be applied on all types of substrates; concrete, bricks or stones.

## Advantages

- Waterproof.
- Non-shrink, Minimizes cracking potential as well as allowing jointless repair and leveling applications.
- Outstanding abrasion and scratch resistance.
- Characteristics improvement over 10 years due to slow hydration of Active dicalcium silicate.
- Application thickness up to 100 mm.
- High early strength with long term strength gain.
- Resists alkalis and acids of PH as low as 4.
- Resists carbonation providing excellent protection to steel reinforcement.
- Formulated for short and long term efficiency – Life time.
- Nontoxic, suitable for food industry and potable water.
- Doesn't need any protection against U.V. after application.
- Continuous sealing of cracks and voids by autogeneous healing due to the slow hydration of Dicalcium silicate(C<sub>2</sub>S).

## Uses

**Vicarep-F** is ideal for repair applications that require fast setting, dimensional stability and high durability.

**Vicarep-F** provides an extremely durable, seamless, high strength, impact resistant repair & leveling coat for (but not limited to) the following applications:

- Swimming pools and water retaining structures.
- Brick lining and repair.
- Structural concrete rehabilitation.
- Squash courts lining.
- Concrete Flooring repair.
- Grain silos.

**Vicarep-F** is also a complementary product to our products **Vicafloor**, **Vicaline**, **Vicatile B**...etc, as well as a leveling base for resin mortars, paints and waterproofing membranes.

## Standards & Specifications

<b>Color</b>	Grey
<b>Initial setting time</b>	≈ 20 min. @ 20° C
<b>Final setting time</b>	≈ 50 min @ 20° C
<b>Toxicity</b>	Non-toxic
<b>Fresh density</b>	2.3 Kg/liter
<b>Bulk density</b>	1.7 Kg/liter

**Linear Shrinkage** typical value at 28days according to BS EN 12617-4 (%): 0.03%

**Linear Expansion** typical value at 28days according to BS EN 12617-4 (%): 0.01%

**Flexural strength** typical values according to EN196-1 is ≥ 4.0 Mpa at 7 days

**Compressive strength** according to EN196-1 typical values are as follows:

Water to powder ratio = 0.11 by weight

Age					
24 hours	7 days	28 days	56 days	120 days	180 days
18 Mpa	28 Mpa	40 Mpa	52 Mpa	64 Mpa	68 Mpa

\*Compressive strength is increasing thereafter due to the slow hydration of Active Dicalcium silicate(C<sub>2</sub>S).

Depth of water penetration: (According to BS EN 12390-8)

Age(days)/pressure(bar)	24 Hours /1.0 bar
Penetration (mm)	0

## Package & Coverage

**Vicarep-F** is supplied in 30 Kg bags.

After mixing with water, the 30 Kg bag yields about 15.6 liters of mortar covering 1.5 m<sup>2</sup> of about 10.0 mm thickness on an even surface. Allowance should be made for any possible wastage or surface unevenness when estimating.

## Application Instructions

### Surface preparation

In order that maximum bond strength is achieved between the substrate and the lining, all concrete substrates should be sound, clean, and free from laitance, dust, loose particles, grease, oil or any other foreigner matter.

All concrete surface defects (Honey combs, Rock pockets, air voids .....etc.) should be repaired following a proper repair procedure, using **Vicarep-F**. Before applying **Vicarep-F**, all surfaces should be saturated with water with no running water (saturated surface dry).

For better adhesion, **Vicarep-F** should be applied over a wet coat of **Vicabond**.

### Mixing

- In a suitable container add 3.00 – 3.30 liters of potable water and start mixing with a slow speed drill (350 - 450 rpm while adding gradually the content of a 30 Kg bag of **Vicarep-F** for enough time to produce a homogeneous mix.
- Mechanical mixing is essential for a rapid and homogeneous mix. Forced action pan mixers are suitable.

### Application

- **Vicarep-F** will be applied in a single or more layers depending on the thickness needed.
- The first layer (about 7-10mm thickness) should be pressed firmly with the trowel while troweling to insure a good compaction and bond with the substrate.
- Build up with consecutive layer(s) (about 7-10mm thickness) will be applied immediately after the first layer and trowel finished as usual.
- **Vicarep-F** can be applied for thicknesses from 7mm up to 100mm.
- If time is elapsed between the two layers, the first one should be wetted before the application of the second layer.
- **Vicarep-F** can be smoothed after being hard enough for smoothing.
- Once the applied lining is hard (mostly after initial setting), it should be cured by means of water for at least 48 hours such as wet hessian, or by using a curing compound.

### Precautions

- Protect the **Vicarep-F** bags from direct sun rays or any other source of heat before use, this can lead to a very fast setting.
- Avoid working on hot substrates.
- Avoid mixing with hot water.
- Never remix the material with water once it started to set.
- **Avoid contact with gypsum or any other sulfates, on substrate, mixing water or curing water in plastic state.**

## Health and safety

**Vicarep-F** is alkaline when mixed with water and should not come into contact with skin or eyes. Avoid inhalation of dust during mixing and wear safety glasses, dust mask and gloves. If skin contact occurs, wash thoroughly with clean water. Should eye contact occur, rinse immediately with plenty of clean water and seek medical advice.

Full health and safety data are given in Product Safety Data Sheet.

## Storage & shelf life

**Vicarep-F** should be stored in normal temperature and closed shaded dry area in undamaged original packing.

It is recommended to be re-tested after 6 months from the production date if packed in paper bags and retested after 18 months if packed in plastic bags.

## Technical support

For any technical support, please consult our technical office or representatives.

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