

# VICADEX®

Edition 04020

## High performance Waterproofing one component cementitious slurry

### Description

**Vicadex** is a one component waterproofing slurry for concrete and masonry based on **Prompt** cement, siliceous graded fillers, additives and a special redispersable terpolymer.

When mixed with water, it produces a ready to use workable waterproofing slurry.

### Advantages

- Triple sealing by the action of the terpolymer, **Prompt** cement, and gel formation into the concrete pores.
- Characteristics improvement over 10 years.
- 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.
- Self-curing, improving the degree of hydration.
- Suitable for food industry and potable water.
- Excellent adhesion.
- Doesn't need surface smoothing before application.
- Doesn't need any protection against abrasion or U.V. after application.

### Uses

**Vicadex** is ideal to be used for the following operations:

- To provide non-toxic, waterproof coating that is flexible enough to accommodate concrete movement in water retaining structures.
- To protect concrete against concrete decay providing a chemical resistant barrier to corrosive salts and atmospheric gases.
- To reface and even out variations in concrete surfaces.
- To seal and coat tie bar holes to ensure water tightness.
- To provide a tough and durable coating.
- To provide protection to concrete surfaces from carbonation and chloride attack.
- Used as a waterproof base for swimming pools before fixing tiles.
- Excellent adhesion has a unique balance of organic and inorganic compounds.
- To provide a Negative side waterproofing over concrete substrates such as basements & elevator pits.
- As a bonding agent between new and old concrete.
- Where crack bridging is needed such as for roofs & balconies, we recommend using **Vicaproof-268** for its high Crack bridging capabilities.

### Standards & Specifications

|                      |   |
|----------------------|---|
| <b>Color</b>         | Grey (Various colors are available for large orders.)   |
| <b>Toxicity</b>      | Non-toxic   |
| <b>Pot life</b>      | 40mins at 24° C   |
| <b>Fresh density</b> | 1.97 Kg/liter (by Brush)                                |
| <b>Adhesion</b>      | > 10 Kg/cm <sup>2</sup>                                 |
| <b>Setting Time:</b> | <b>IST:</b> 60mins at 24° C <b>FST:</b> 90mins at 24° C |

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

| Age(days)/pressure(bar) | 14 days /0.5 bar | 28 days / 1.5 bar | 56 days / 3 bar |
|-------------------------|------------------|-------------------|-----------------|
| <b>Penetration (mm)</b> | <b>0</b>         | <b>0</b>          | <b>0</b>        |

### Package & Coverage

**Vicadex** is supplied in 25 Kg bags (other sizes maybe available upon request).

After mixing with water, the 25 Kg bag yields about 16 liters of slurry covering 16 m<sup>2</sup> of 1mm thickness achievable in two coats on an even surface.

The rate of consumption / m<sup>2</sup> for positive side waterproofing will be 1.5-2.5 Kg applied in a minimum of two perpendicular coats & for negative side waterproofing will be 3.0-4.0 Kg applied in a minimum of three perpendicular coats. Allowance should be made for any possible wastage when estimating.

### Application Instructions

#### **Surface preparation:**

All substrates should be clean, free from 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 **Vicaseal Mortar** or **Vicarep**. Before applying **Vicadex**, all surfaces should be saturated with water with no running water (saturated surface dry). In case of Negative side waterproofing, all water leaks must be stopped using **Vicaseal Injection & Vicareplug** before application.

#### **Mixing:**

- In a suitable container add 6.5 – 7.0 liters of potable water to the content of a 25 Kg bag of **Vicadex**.
- Start mixing with a slow speed drill (350 - 450) rpm for enough time to produce a homogeneous mix.

#### **Application:**

- The slurry will be applied to the prepared surfaces using a suitable brush at the rate of at least two perpendicular coats having about 1.0 mm thickness or about 16 m<sup>2</sup> per batch using a 25 kg **Vicadex** bag.
- Additional coats are optional and depend on the water head and substrate conditions.
- The final coat can be smoothed using a trowel after painting.
- As a bonding agent, the new concrete should be casted on a wet coat of **Vicadex**.

#### **Precautions:**

- Protect the **Vicadex** 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.
- After application, **Vicadex** should be allowed to self-cure for at least 3 days before any water contact.
- **Avoid contact with gypsum or any other sulfates on substrate, mixing water or curing water in plastic state.**

### Action

- The redispersible terpolymer, besides being a strong adhesive, is a water-proofing material. It is quite resistant to acids, alkalis and UV rays. Its function in this system is to insure the primary waterproofing awaiting the cement matrix to be full cured and become water proof itself while it is still working. It also works as a curing compound making the slurry self-curing, improving the degree of hydration.
- **Prompt** cement is a natural cement having the following characteristics :
  - Fineness up to 8000 cm<sup>2</sup>/gm.
  - High adhesion to most surfaces.
  - Water proof, all the hydration products are solids.
  - Non shrink in plastic state, very low shrinkage (<0.05 %) after hardening.
  - Resists chemicals of pH as low as 4.
  - Resists carbonation.
  - Characteristics improvement over 10 years.
  - Self-recovery
  - Suitable for food industry and potable water.

The function of **Prompt** cement in this system is to insure the long-term water proofing and chemical resistance. Furthermore, during its early hydration, **Prompt** cement releases Alumina Gel (AH<sub>3</sub>) which under hydrostatic pressure seals and fills all the concrete pores and voids.

### Health and safety

**Vicadex** 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.

### Storage & shelf life

**Vicadex** 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.

### Technical support

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

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