

# VICAFLOOR-SL510®

Edition 02020

Heavy Duty, Fast Setting, Cementitious Self-Leveling Topping

## Description

**Vicafloor-SL510** is a one component Cementitious Self-Leveling Topping based on **Vicat** Special Binders, siliceous graded aggregates, mineral additives and admixtures.

When mixed with water, it produces a Highly Flowable, Heavy Duty Topping for levelling & smoothing Concrete floors for thicknesses ranging from 3mm -12mm, higher thickness up to 100mm can be achieved by the addition of suitable aggregates. **Vicafloor-SL510** Can be dry polished after only 24h to a very shiny surface. **Vicafloor-SL510** is classified as **CT-C50-F5** According to **BS EN 13813:2002**

## Advantages

- Fast Setting and drying.
- 4 hours walk on time (+20°C).
- Very low shrinkage minimizes cracking risks.
- Highly Flowable with maintained flowability during its pot life.
- High early strength with long term strength gain.
- Characteristics improvement over 10 years.
- Application thickness from 3mm to 12mm (Can be extended).
- Easy to use.
- Very good air release.
- Smooth surface profile.

## Uses

**Vicafloor-SL510** provides a durable, seamless, high strength, abrasion resistant floor.

**Vicafloor-SL510** is ideally suitable either where the floor is subjected to severe conditions of service, or where ever a luxury floor is required.

**Vicafloor-SL510** Can also be used as a heavy duty underlayment.

**Vicafloor-SL510** is supplied in different colors enabling decorative designs to be applied.

## Technical characteristics

<b>Color</b>	Grey (other colors are available upon request)
<b>Toxicity</b>	Non-toxic
<b>Processing Conditions</b>	10°C - 35°C & 35-75% RH, recommended 40-65%
<b>Water/Powder ratio</b>	0.22 - 0.24
<b>Setting time @ 21° C</b>	Initial ≈ 35 min. Final ≈ 60 min.
<b>Workable time @ 21° C</b>	20 - 25 min
<b>Dry density</b>	≈ 1.1 Kg/L
<b>Fresh density</b>	≈ 2.1 Kg/L
<b>Adhesion to concrete substrate</b> <small>(Adhesion depends very much on proper surface preparation)</small>	> 1.5 N/mm <sup>2</sup> (primed with Primer- A42)
<b>Flow according to BS EN 1015-3 (Without Jolting )</b>	40 Cm
<b>Linear Shrinkage at 56d according to BS EN 12617-4 (%)</b>	0.04% (Unrestrained)
<b>Linear Expansion at 56d according to BS EN 12617-4 (%)</b>	0.02% (Unrestrained)
<b>Flexural strength at 28d according to BS EN 196-1 (MPa)</b>	> 5 MPa
<b>Compressive strength according to BS EN 196-1 (MPa)</b> (4x4x16 prisms)	

Water/Powder ratio	Age					
	24 hours	7 days	14 days	28 days	56 days	90 days
0.22	25	35	42	50	56	60

Compressive strength is increasing thereafter.

## Package & Coverage

**Vicafloor-SL510** is supplied in 25 Kg packs.

After mixing with water, the 25 Kg pack yields about 14.0 liters of self-leveling topping covering about 4.0 m<sup>2</sup> of 3 mm thickness on an even surface. Consumption rate can slightly vary depending on the surface roughness.

Allowance should be made for any possible wastage when estimating.

## Application Instructions

### **Surface preparation**

A good floor topping is only as good as the preparation.

In order that maximum bond strength is achieved between the substrate and the floor topping, all concrete substrates should be sound, clean, and free from laitance, dust, loose particles, grease, oil or any other foreigner matter. The substrate must be rough, porous and load bearing. Any water leaks must be stopped and repaired following a proper repair procedure, using **Vicaseal Mortar** or **Vicaroc & Vicaseal Injection** if required.

### **Priming**

All substrates must be primed using a suitable primer such as **Primer- A42** and left to cure until the surface is tacky.

If any steel rebar are uncovered, they should be protected first using **Vicasteel-CP** before priming.

### **Mixing**

- Add 5.00 - 5.50 liters of water to one **Vicafloor-SL510** 25 Kg bag.
- Either the powder or the water may be introduced first in the mixer, for best results introduce half of the water then all the powder then the remaining water quantity & continue mixing till homogeneity.
- A maximum 0.25 - 0.50 liter of additional water can be added under stirring until the desired consistency is achieved.
- Colored versions may vary in water demand.
- Mechanical mixing using a slow speed drill (300 - 600 rpm) is essential for a rapid and homogeneous mix.
- For larger thicknesses up to 100mm, 0.5/ 2.0 mm clean dry sand can be added to the mix with a rate of 50% by weight of Powder, provided that the water powder ratio is fixed, higher addition rates may decrease the flowability; experience in field is a major criteria for such applications.

### **Application**

- Make sure that the primer is tacky using your finger tip and there is no ponding and no bond breaking substance over the primer.
- Pour **Vicafloor-SL510** over the primed substrate & spread it using a suitable gauge rake to the desired thickness immediately after pouring.
- Good raking is sufficient to push any entrapped air to the surface; however a spiked roller can be used to speed up the air releasing procedure immediately after raking.
- The whole process should be fast to avoid any roller markings on the surface.
- Too much rolling & late rolling are the main reason for dotted matrix surface marks.
- Make sure to work in sections that can be finished within 25 min.
- **Vicafloor-SL510** can be finished using a smooth rake.
- For large thicknesses, suitable guides can be used to limit **Vicafloor-SL510** from spreading since it has a very flowable consistency. The guides can be removed after hardening.
- A very shiny surface can be obtained by dry polishing using diamond pads.
- **Vicafloor-SL510** is self-curing and doesn't require any additional curing; however it must be protected for 24 hours against direct sun light, wind and hot temperature.
- Make sure that the work sections can be finished within 30 min.

### **Precautions**

- Protect the **Vicafloor-SL510** 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 and avoid mixing with hot water.
- The temperature of **Vicafloor-SL510** & the elements coming into contact with it should be in the range of 5°C to 35°C.
- Never exceed the stated water dose and temperature to avoid bleeding, segregation and further cracking. Never remix with water to retrieve its initial workability.
- For application thickness other than the stated, please refer to our technical office.
- **Avoid contact with gypsum or any other sulfates on substrate, mixing water or curing water in plastic state.**

## Storage & shelf life

**Vicafloor-SL510** 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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