

VICAFLOOR-SL520®

Edition 02020

Heavy Duty, Fast Setting, Self-levelling Abrasion Resistant Floor Topping

Description

Vicafloor-SL520 is a one component, Cementitious abrasion resistant Topping based on **Vicat** Special Binders, graded Quartz fillers, mineral additives and admixtures. When mixed with water, it produces a Free Flowing, Heavy Duty Topping for levelling, repairing & renovation of Concrete floors for thicknesses ranging from 4mm -30mm.

Vicafloor-SL520 Can be grinded to expose the aggregates & dry polished using diamond disks after only 24h to a very shiny surface. **Vicafloor-SL520** is classified as **CT-C60-F6-A15** According to **BS EN 13813:2002**

Advantages

- Fast Setting and drying.
- Self-Levelling with good air release.
- 4 hours walk on time (+20°C).
- Very low shrinkage minimizes cracking risks.
- Joint-less flooring can be achieved due to low shrinkage.
- Flowable with maintained consistency during its pot life.
- High early strength with long term strength gain.
- Reduced porosity enhances the resistance against carbonation & chloride penetration.
- Good sulfate resistance after full curing.
- Good resistance to chemicals of PH ≥ 4.
- Water resistant, No strength loss under water.
- Characteristics improvement over 10 years due to the slow hydration of Dicalcium Silicate (C2S).
- Application thickness from 4mm to 30mm.
- Self-Curing in normal condition. (No wind or heat)
- Easy to use and economic.

Uses

Vicafloor-SL520 provides a durable, seamless, high strength, abrasion resistant floor.

Vicafloor-SL520 is ideally suitable either where the floor is subjected to severe conditions of service, or where ever a luxury floor is required such as ware houses, storage depots, supermarkets, garages, shopping centers ...etc

Vicafloor-SL520 Can also be used as a Flowable repair material.

Vicafloor-SL520 is supplied in different colors enabling decorative designs to be applied.

Technical characteristics

Color	Grey (other colors are available upon request)
Toxicity	Non-toxic
Maximum Aggregate Size	1.3 mm
Processing Conditions	10°C - 35°C & 35-75% RH, recommended 40-65%
Water/Powder ratio	0.14 - 0.16
Setting time @ 21° C	Initial @ ≈ 35 min ./ Final @ ≈ 60 min.
Workable time @ 21° C	20 - 25 min
Dry density	≈ 1.45 Kg/L
Fresh density	≈ 2.25 Kg/L
Impermeability to water, expressed as capillary absorption (kg/m²·h^{0.5}): BS EN 1062-3	< 0,1 kg/m ² · h ^{0.5}
Adhesion to properly prepared concrete substrate	> 1.5 N/mm ² (primed with Primer- A42)
Flow according to BS EN 1015-3 (Without Jolting)	32 Cm
Linear Shrinkage at 56d according to BS EN 12617-4 (%)	0.04% (Unrestrained)
Linear Expansion at 56d according to BS EN 12617-4 (%)	0.01% (Unrestrained)
Wear Resistance at 28d according to BS EN 13892-3	≤ 15 Cm ³ /50 Cm ²
Flexural strength at 28d according to BS EN 196-1 (MPa)	> 8 MPa

Compressive strength according to BS EN 196-1 (MPa) (4x4x16 prisms)

Water/Powder ratio	Age				
	24 hours	7 days	14 days	28 days	56 days
0.14	32	40	50	60	65

Compressive strength is increasing thereafter.

Package & Coverage

Vicafloor-SL520 is supplied in 25 Kg packs. After mixing with water, the 25 Kg pack yields about 12.5 liters of Flowable mortar covering about 2.5 m² of 5 mm thickness on an even surface. Consumption rate might 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 & 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.

For porous substrates another coat of **Primer-A42** may be applied after the curing of the first coat.

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

Mixing

Add 3.50-3.75 liters of water to one **Vicafloor-SL520** 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 liter of additional water can be added under stirring until the desired consistency is achieved. Mechanical mixing using a slow speed drill (300 - 600 rpm) is essential for a rapid and homogeneous mix.

Application

Applications techniques are various and depend on the applicator's qualifications however the following methods are the most common: -

*Make sure that the primer is tacky using your finger tip and there is no ponding and no bond breaking substance over the primer.

For small thicknesses, pour **Vicafloor-SL520** 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-SL520** can be finished by a smooth rake.

For larger thicknesses, suitable guides can be used to limit **Vicafloor-SL520** from spreading since it has a very Flowable consistency. These guides can be removed after hardening. Pour **Vicafloor-SL520** in the formed zone and strike off any extras using a straight edge, then smooth using a smooth rake.

A very shiny surface can be obtained by dry polishing using diamond pads. **Vicafloor-SL520** 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.

Precautions

Protect the **Vicafloor-SL520** 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-SL520** & 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-SL520 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.

Disclaimer...The information contained herein is included for illustrative purpose only and, to the best of our knowledge, is accurate and reliable. Hemts cannot however under any circumstances make any guarantee of results or assume any obligation or liability in connection with the use of this information. As Hemts has no control over the use to which may put its products, it is recommended that the products be tested to determine if suitable for a specific application and/or our information is valid in a particular circumstance. Responsibility remains with the architect or engineer, contractor and owner for the design, application and proper installation of each product. Specifier and user shall determine suitability of products for specific application and assume all responsibilities in connection therewith.

