

# VICAFLOOR-SC530®

Edition 11024

## Heavy Duty, Fast Setting, Cementitious Abrasion Resistant Floor Topping

### Description

**Vicafloor-SC530** 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 workable, Heavy Duty Topping for levelling, repairing & renovation of Concrete floors for thicknesses ranging from 6mm - 50mm. **Vicafloor-SC530** Can be grinded to expose the aggregates & dry polished using diamond disks after only 24h to a very shiny surface.

**Vicafloor-SC530** is classified as **CT-C50-F6-A12** According to **BS EN 13813:2002**

### Advantages

- Fast Setting and drying.
- Self-compacting for easier application.
- 4 hours walk on time (+20°C).
- Good air release.
- Very low shrinkage minimizes cracking risks.
- Joint-less flooring can be achieved due to low shrinkage.
- Self-Curing in normal conditions (No wind or heat)
- High early strength with long term strength gain.
- Application thickness from 6mm to 50mm.
- Easy to use and economic.

### Uses

**Vicafloor-SC530** provides a durable, seamless, high strength, abrasion resistant floor.

**Vicafloor-SC530** 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-SC530** Can also be used as a repair material.

**Vicafloor-SC530** 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	2.4 mm
Application thickness	6mm - 50mm
Processing Conditions	10°C - 35°C & 35-75% RH, recommended 40-65%
Water/Powder ratio	0.10 - 0.11 (water ratio may vary for special colors)
Setting time @ 21° C	Initial ≈ 35 min. - Final ≈ 50 min.
Workable time @ 21° C	15 - 20 min
Dry density / Fresh density	≈ 1.6 Kg/L / ≈ 2.3 Kg/L
Adhesion to concrete substrate	> 1.5 N/mm <sup>2</sup> (Epoxy primer + sand (SD5-125) broadcast)
Flow according to BS EN 1015-3 (Without Jolting)	24 Cm
Linear Shrinkage at 56d according to BS EN 12617-4 (%)	0.01% (Unrestrained)
Linear Expansion at 56d according to BS EN 12617-4 (%)	0.00% (Unrestrained)
Böhme Abrasion resistance BS EN 13892-3	≤ A12
Flexural strength at 28d according to BS EN 196-1 (MPa)	> 6 MPa
Typical Compressive strength results according to BS EN 196-1 (MPa) (4x4x16 prisms)	

Water/Powder ratio	24 hours	7 days	28 days	56 days
0.1	36	42	51	55

### Package & Coverage

**Vicafloor-SC530** is supplied in 30 Kg packs.

After mixing with water, the 30 Kg pack yields about 14.4 liters of Flowable mortar covering about 1.45 m<sup>2</sup> of 10 mm thickness on an even surface. Consumption rate can be higher 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.
- All substrates must be solid, thoroughly clean and free from laitance, dust, loose particles, oil, wax, grease, asphalt, latex and gypsum compounds, curing compounds, sealers and any contaminant that might act as a bond breaker.
- Acid etching, adhesive removers, solvents and sweeping compounds are not acceptable means for cleaning the substrate. Sanding equipment is not an effective method to remove curing and sealing compounds from concrete.
- The substrate must be rough, porous and load bearing. If necessary, mechanically clean down to a sound, solid substrate by shot blasting or similar. Overwatered, frozen or otherwise weak concrete surfaces must also be cleaned down to sound, solid concrete by mechanical methods. Concrete must have a minimum ICRI Concrete Surface Profile of 3 (CSP #3).
- Approved, non-porous substrates must be mechanically abraded to create a profiled surface for bonding.
- Any additional preparation required to achieve these profiles must likewise be mechanical.
- Substrate and ambient temperatures must be 10 - 35°C during and for 48 hours after the installation of **Vicafloor- SC530**.

#### ➤ Water leaks, Joints and Moving Cracks

- Any water leaks must be stopped and repaired using **Vicaseal Mortar** or **Vicaroc-R & Vicaseal Injection** if required.
- Under no circumstances should **Vicafloor- SC530** be installed over any joints or any moving cracks. All existing expansion joints, isolation joints, construction joints and control joints (saw cuts), as well as all moving cracks, must be honored up through the topping by installing a flexible sealing compound specifically designed for use in moving joints.
- Failure to do so may result in cracking and/or disbonding of the topping. Even the slightest amount of movement in a control joint will cause the **Vicafloor- SC530** to show a hairline crack in a pattern reflective of the joint.
- **Hemts construction chemicals ltd.** cannot be responsible for problems that arise from joints, existing cracks or new cracks that may develop after the system has been installed.

#### ➤ Dormant Cracks

- Before proceeding with the installation, all dormant cracks greater than 0.7 mm wide must be prefilled with a fully rigid, 100% solids material, such as **Vicarep-F** and suitable bonding agent.
- The filling of dormant cracks as described above is recommended to help prevent the cracks from showing through the topping. However, should movement occur, cracks will reappear.

#### ➤ Priming

- Prime with a suitable Substrate Preparation Epoxy Primer. Follow the recommendations for substrate preparation above, and apply the Epoxy primer with sand broadcast, carefully following the instructions in the Epoxy primer technical data sheet. Contact our technical office for information about suitable sand.

#### ➤ Mixing

- **Vicafloor- SC530** can be mixed two bags at a time. Mix each 30kg bag with 3.00 to 3.30 liters of clean water.
- Pour the water in the mixing drum first, and then add each bag of **Vicafloor- SC530** while mixing with a helical Paddle and a heavy-duty drill (min. 650 rpm). Mix thoroughly for approximately 2 to 3 minutes to obtain a lump-free mix.
- Do not overwater! Yellowish foam while mixing or settling of the aggregate while placing indicates overwatering.
- A maximum 0.30 liter of additional water can be added under stirring until the desired consistency is achieved. Avoid over watering which will lead to aggregate segregation. Water ratio may vary for special colors. (refer to technical office)
- Mechanical mixing using a moderate speed, high torque drill is essential for a rapid and homogeneous mix.

#### ➤ Application

- Pour **Vicafloor- SC530** over the primed substrate & spread it in one application by screeding.
- Set up the Screeding guides with a suitable span about 1.2 m to minimize any depressions.
- Pour **Vicafloor-SC530** in the formed zone and strike off any extras using a straight edge.
- Move the straight edge back and forth with a saw-like motion, then smooth using a smooth rake.
- Straight edging the surface, has the greatest effect on the surface tolerances. It should be performed over well leveled screed guides using straightedges specially made for this purpose including hollow magnesium straightedges.
- **Vicafloor- SC530** has a good air release characteristic; however, a spiked roller can be used to speed up the air releasing procedure; immediately after spreading to avoid any roller markings on the surface.
- Unsuitable spiked roller, too much rolling & late rolling are the main reason for dotted matrix surface marks.
- Temporary screed guides can be lumber, T bars ...etc. which should be removed after the screed hardening.
- Permanent metallic strip guides will remain as a part of the screed allow decorative designs or floor marking.
- Even surfaces can be obtained by proper straight edging prior to smoothing by mechanical grinding using diamond disks, and a very shiny surface can be obtained by dry polishing using diamond pads.
- Make sure to work in sections that can be finished within 15-20 min.
- **Vicafloor-SC530** 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. A proper curing compound may be used.
- It is recommended to seal the flooring after grinding using **Purvaseal-PA70** or any other suitable sealer.

#### ➤ Precautions

- Protect the **Vicafloor-SC530** bags from direct sun rays or any other source of heat before use, this can lead to a very fast setting and loss of flowability. During the setting, exposure to drafts and intense sunlight should be avoided. This can lead to a too fast removal of moisture, whereby the screed is more susceptible to cracking, shrinkage and the surface edges can be pulverized. Avoid working on hot substrates and avoid mixing with hot water.
- The temperature of **Vicafloor-SC530** & the elements coming into contact with it should be in the range of 10°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.
- Avoid contact with gypsum or any other sulfates on substrate, mixing water or curing water in plastic state.

**The Application data fitted in this data sheet should be considered as a guide, however experience in field, site trials & applicators qualifications should be considered.**

#### Storage & shelf life

**Vicafloor-SC530** should be stored in normal temperature over well sealed pallets in a closed shaded dry area in undamaged original packing or sealed plastic bags. It is recommended to be re-tested after 6 months from the production date.

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