



SILKON
ADDITIVES (INDIA) PVT LTD

Silfloor FH

Non metallic, High abrasive resistant surface hardening cementitious floor hardener

Silfloor FH provide a highly abrasion resistant surface to concrete floors by the dry shake-on method which ensures that the hardwearing surface bonds monolithically to the base concrete. They are ideally suited for all industrial areas subject to the heaviest traffic, e.g. loading bays, trucking lanes, car parks, workshops, machine shops, ramps and spillways.

Product usages and advantages

- Non metallic - does not rust or stain.
- Provides a hard, abrasion resistant surface
- Forms monolithic bond with base concrete

Easy and economical to apply

Standards compliance

Abrasion resistance (IS : 1237-1980)
Silfloor FH has been tested as per IS:1237 - 1980 against control concrete for abrasion resistance.
Test results showed that Silfloor FH improves the abrasion resistance of concrete by 225% when tested as per guidelines in IS:1237 - 1980.6.

Description

Silfloor FH is quality controlled, factory blended powder which are ready to use on site. They contain special hardwearing aggregates which have been selected for abrasion and wear resistant properties as well as shape and size. These latter considerations, together with the use of high performance workability admixtures, produce a material which is easy to trowel into the surface of fresh, wet concrete. Silfloor FH cure monolithically to provide a dense, non-porous surface which is extremely hardwearing and abrasion resistant. Monolithic cure ensures that problems normally associated with thin 'granolithic' screeds, viz., shrinkage, cracking, etc., are completely overcome. Being non-metallic, Silfloor FH provide a non-slip surface which will never rust and disintegrate. All concrete floors shall be surfaced or broadcast with Silfloor FH a non-metallic monolithic surface floor hardening compounds containing rust free, hardwearing aggregates. The aggregates shall have a Moh's hardness of not less than 10 for Silfloor FH.

Technical support

Silkon offers a comprehensive range of high performance, high quality concrete flooring construction products. In addition, Silkon offers technical support service to specifiers, end-users and contractors, as well as on-site technical assistance in locations all over the country.

Properties

Compressive strength

Silfloor FH shall possess a minimum compressive strength of 60N/mm². when tested as per IS: 516-1959.

Application instructions

Base concrete

The base concrete should have a minimum cement content of 300 kg/m³. The concrete mix should be designed to minimise segregation and bleeding. The concrete should have a slump of between 75 and 100 mm. Use of Silkon's water reducing admixture is recommended. The base concrete should be laid and compacted in accordance with good concrete practice. Accurate finished profile and minimum laitance build-up should be ensured. Particular attention should be paid to bay edges and corners to ensure full compaction.

Silfloor FH is applied for different types of industrial use.

Application rate (kg/m ²)	Intended Traffic Use	Average Wear (IS:1237-1980)
6.5	Heavy	<2mm
4.5	Medium	>2 <3.5mm
3.0	Light	>3.5 <4mm

It is recommended that the floor be marked off into bays of known area. Sufficient material should then be laid out to meet the required spread rates.

Application of Silfloor FH can begin when the base concrete has stiffened to the point when light foot traffic leaves an imprint of about 3mm. Any bleed water should by now have evaporated.

Silfloor FH is applied in two stages.

(a) The first application is made using 50% to 70% of the total material. Silfloor FH is evenly broadcast onto the concrete surface. When the material becomes uniformly dark by the absorption of moisture from the concrete this first application can be floated. Wooden floats or, on large areas, the power trowel with disc may be used. It is important, however, that the surface is not over worked.



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(b) Immediately after floating, the remaining Silfloor FH is sprinkled evenly over the surface. Again moisture is absorbed and the surface can be floated in the same way as before. Final finishing of the floor using a power trowel can be carried out when the floor has stiffened sufficiently so that damage will not be caused.

Timing of Application

The timing of application Silfloor FH is important and critical. If applied too early, bleed or excess water will wash away the cementitious content of the products, thereby making them ineffective. Also denser aggregates sink into the concrete. If the application of Silfloor FH is done too late, there will not be sufficient water/moisture to absorb the material into the concrete. Material forcibly applied and trowelled thus, will cause cracks on the surface later, as there is no water/moisture to hydrate the product.

Curing

Tests have shown that proper curing of concrete floors treated with products such as Silfloor FH is essential to ensure the physical properties of the floor.

The most efficient method of curing by using Silkon WB40, curing membrane which conforms to ASTM and DOE specifications.

However, in indoor applications where curing conditions are less arduous and breakdown of the membrane slower, alternative approved methods of curing such as polythene sheeting or water ponding are acceptable.

Limitations

- For concretes with optimised water cement ratios, Silfloor FH shall not be broadcast in excess of 3 - 4 kg /m². For such applications, consult Silkon Technical Team.
- Silfloor FH is not advised for broadcast over concrete in subzero temperatures, such as, floorings for cold storages etc. However, concrete on which Silfloor FH has been applied can be subjected to sub zero temperatures after curing.

Packaging

Silfloor FH is supplied in sealed 25 kg HDPE bags.

Storage

If kept in original undamaged packing, the shelf life of Silfloor FH should be atleast 12 months under normal warehouse conditions.

Precautions

Health & Safety instructions

Silfloor FH contains portland cement and are therefore alkaline when in contact with water. Prolonged contact with the skin should be avoided. Any eye contamination should be washed immediately with plenty of clean water and medical advice sought.

Fire

Silfloor FH is not flammable.