

Techno Floor Hard Top

Surface hardening compound for fresh concrete floors

Uses

Techno Floor Hard Top provides a highly abrasion resistant surface to fresh concrete floors by the dry shake method which ensures that the hard wearing surface bonds monolithically to the base concrete. It is ideally suited for all industrial areas subjected to heavy traffic such as:

- Power stations
- Heavy industry
- Agricultural building
- Distillation plants
- Laboratories
- Car parks
- Warehouse floors and loading bays
- Work shops

Advantages

- Supplied ready to use - no additives required
- Provides a hard, abrasion resistant surface
- Forms monolithic bond with fresh concrete base
- Hard, dense surface resistant to oils and grease
- Non-metallic aggregate - will not rust when wet

Description

Techno Floor Hard Top surface hardening compound is a quality controlled, factory blended powder which is ready to use on site, it consists of special hard wearing emery aggregates selected for their physical properties of abrasion and wear resistance, Portland cement and special additives to improve workability.

This combination produces a material which is easy to trowel in the surface of fresh, wet concrete. Techno Floor Hard Top cures monolithically to provide a dense, non porous surface which is extremely hard wearing and abrasion resistant. Monolithic cure ensures that problems normally associated with thin (Granolithic) screeds, e.g. curling, shrinkage, cracking, etc. are completely overcome.

Design criteria

Base concrete

The base concrete should have a minimum cement content of 300 kg/m³. The concrete mix should be designed to minimize segregation and control

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bleeding, although some limited bleed is desirable to ensure sufficient moisture is available to wet out the Techno Floor Hard Top when it is first applied. The use of water reducing admixtures from the M.T.C. Techno mix range is strongly recommended in order to achieve (water: cement) ratio below 0.55. The base concrete should have an on-site slump of between 75 and 100 mm.

Properties

Abrasion resistance

The abrasion resistance of Techno Floor Hard Top been tested using a taber abrasion machine (fitted with 1 Kg, H-22 wheels) showing that Techno Floor Hard Top improves the abrasion resistance of concrete by minimum 200%.

Compressive strength (to &S 1881 Part 116 1983)

At water contents equivalent to those obtained in practical applications, the typical 28 day compressive strength of Techno Floor Hard Top cubes is 70 N/mm²

Instructions for use

Techno Floor Hard Top should be applied at an even application rate of 5 kg/m². It is recommended that the floor be marked off into bays of known area. Sufficient materials should then be laid out to meet the recommended spread rate.

Techno Floor Hard Top is applied in two stages.

A) The first application is broadcast at an even rate of 2 kg/m² onto the concrete surface. When the material becomes uniformly dark by the absorption of moisture from the base concrete, this first application can be floated. Wooden floats or, on large areas, a power float, may be used. It is important, however, that the surface is not overworked.

B) Immediately after floating, the remaining 2 kg/m² of Techno Floor Hard Top is applied evenly over the surface at right angles to the first. Again, when moisture has been absorbed the surface can be floated in the same way as before.

Final finishing of the floor using the blades of a power float can be carried out when the floor has stiffened sufficiently so that damage will not be caused.

Curing

Proper curing of concrete floors treated with Techno Floor Hard Top is

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essential to the physical properties of the finished floor, however if the floor is to receive further surface treatments please consult M.T.C. office for advise on recommended curing methods.

For indoor applications where curing conditions are less arduous and breakdown of curing membrane is slower alternative approved methods of curing such as polythene sheets taped at the edges is acceptable.

Limitations

- In particularly aggressive environments, where abrasion resistance of the highest order is required, consideration should be given to the use of Techno Floor Hard Top. For guidance contact your local M.T.C. office or representative.
- Do not use Techno Floor Hard Top in areas exposed to acids and their salts or other materials known to rapidly attack or deteriorate concrete containing Ordinary Portland Cement.
- Do not apply to concrete containing calcium chloride or concrete having greater than 3% air entrapment.

Estimating

Supply	
Techno Floor Hard Top :	25 Kg bags

Coverage	
Techno Floor Hard Top :	4:6 m ² /bag

Applications should comply with the recommended rate to obtain the published performance characteristics. Any reduction may have a detrimental effect on the finished floor's abrasion resistance and. in the case of pigmented floors, the quality and consistency of the finish.

The average figures for liquid products are theoretical. Due to the variety and nature of possible substrates, and wastage factors, practical coverage figures will be reduced.

Storage

If protected from the environment in original undamaged packing, the shelf life of Techno Floor Hard Top is 12 months.

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If stored in high temperature and high humidity locations the shelf life will be reduced.

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