

ABBRATION RESISTANCE, HIGH PERFORMANCE, DRY SHAKE, METALLIC, FLOOR HARDENER

Description

FLOOR HARDTOP M is a specially manufactured non-oxysiding, graded metallic aggregate for mixing with cement and stone or granite chips, to provide the hardest surface to floorings and paving, which will remain wear proof, dustproof, waterproof and grease proof. It does not affect the setting times or other properties of the cement, with which it is mixed. **FLOOR HARDTOP M** 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, **FLOOR HARDTOP M** provide a non-slip surface which will never rust and disintegrate.

Uses

FLOOR HARDTOP M is recommended for treating floor areas, where superior abrasion resistance is desired to minimise dusting and maintenance, but not exposed to serious chemical attack. Application areas include;

Aircraft hangars

- Industrial Floors
- Warehouses
- Processing Plants like fertilizer/ Petrochemical units
- Vehicle maintenance shops
- Loading Docks
- Main, High Traffic Aisle ways/ Gangways
- Machine Shops
- Breweries & Bottling plants
- Joint shoulders reinforcement.

Advantages

- Excellent wear resistance and produces high degree of abrasion resistant floor surface.
- Impact resistance 2 to 3 times more than that of plain concrete.
- Superior densified surface than plain concrete which increases resistance to penetration by oil, grease, hydraulic fluids, motor fuels, and many industrial chemicals.
- Compatible with vacuum dewatering flooring (VDF) system
- Facilitates fast construction with minimum site costs.
- Bonds well with most conventional cementitious substrates

Typical Properties

Aspect : Grey powder
Abrasion resistance : Treated concrete will give 400-500% better abrasion resistance than control concrete.

Compressive strength : > 70 MPa at 28 days (IS4031, Part

Hardness on Moh's scale : >8

The concrete used for flooring should be > M25 grade and should be free of bleed & segregation and should not contain more than 3% air.

Surface preparation

After the concrete has been placed, screed immediately; then bull-float/ straightedge the surface. Allow bleed water to rise to surface. Early moisture loss and rapid setting around the perimeter of the slab are typical. Monitor them closely for proper timing of the floating operations.

Do not apply the dry shake in to the bleed water. If excessive bleed water is present, remove standing bleed water by dragging a hose across the surface or using a squeegee or other approved method.

Placing

Apply and float 50% to 70% of the total amount of **FLOOR HARDTOP M** on the first application. Apply the remaining amount on the succeeding application. Applying more than 4 kg/m² in one pass often results in limited success. In most cases, it shocks the base slab by demanding more water than is available for incorporation of the shake. Drier area tends to crack or delaminate, leaving less water available for subsequent shake passes.

Mark the floor areas into bays of convenient size and keep the required quantity of **FLOOR HARDTOP M** ready for each bay.

First shake on application: After the evaporation of bleed-water from the surface of freshly laid concrete, broadcast the powder evenly by hand to obtain a uniformly thick application. Do not throw or broadcast with a shovel. When the applied **FLOOR HARDTOP M** darkens in colour indicating absorption of moisture and when the concrete has stiffened enough to prevent disk float from digging into the surface, float the treated surface using wooden hand float or mechanical float fitted with float blades. Float just enough to bring the excess moisture to the surface.

Second shake on application: Follow with the second application of **FLOOR HARDTOP M** exactly as the first application, but while broadcasting, compensate with extra material over areas under-applied during the first shake on application.

If a coarse non-slip surface is desired, start curing without any more finishing operations.

Finishing

The extent of further floating or troweling depends upon the finish desired on the surface. Different levels of smoothness can be achieved by repeated troweling using power trowel and gradually increasing the blade angle in each repeat troweling. Consult our local representative for advice.

Precautions

- During hot, dry or windy conditions troweling should be kept to the minimum to obtain the required finish.

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- All moisture used to incorporate dry-shake material must come from within the slab. Under no circumstances should water be applied to aid in the incorporation of dry shake.
- Saw the joints as soon as possible, without damaging the concrete.
- If coloured floor hardener is warranted, it is strongly advised to carry out a sample area before finalisation of supply order.
- Clean the tools and equipment with water before the paste sticking to them hardens

Curing

Start curing immediately after final finishing and cover the floor surface to protect it from staining, discoloration, or physical damage.

Technical Support

FIRST CHOICE SPECIALITY CHEMICALS PRIVATE LIMITED provides technical advisory services for on-site assistance and guidance on mix design and applications.

Coverage

The rate of application of FLOOR HARDTOP M depends on the service conditions, which the floor will be exposed to. The recommended rates of application are as below:

For heavy-duty traffic	: 9-11 kg/m ²
For medium duty traffic	: 7-9 kg/m ²
For light duty traffic	: 5-7 kg/m ²

Maximum recommended rate for vacuum dewatered floors is 5 kg/m²

Packaging

FLOOR HARDTOP M is available in 40 kg, moisture resistant bags.

Storage and Shelf life

Store under cover, out of direct sunlight and protect from extremes of temperature. In tropical climates the product must be stored in an air-conditioned environment.

Shelf life is 12 months when stored as above.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult our local FIRSTCHOICE SPECIALITY CHEMICALS PRIVATE LIMITED representative.

Safety Precautions

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapour until product fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Keep away from children and animals. Reseal containers after use. Do not reuse containers for storage of consumable item. For further information refer to the material safety data sheet.

Fire

FLOOR HARDTOP M is non-flammable.

Note

All Technical Data Sheets are updated on regular basis; it is the user's responsibility, to obtain the most recent issue.

Field services where provided, does not constitute supervisory responsibility, for additional information contact our local FIRSTCHOICE SPECIALITY CHEMICALS PRIVATE LIMITED representative.

Disclaimer

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