

ShaliFloor® M DH

Non-Oxidizing Heavy Duty Metallic Floor Hardener



Description

ShaliFloor® M DH (formerly known as Shalimar Diamond Hard) is a single component, pre-blended, metallic floor hardener consisting of cleaned, graded, non-oxidizing metallic aggregates, pigments and admixtures. It provides a dense and tough surface capable of withstanding abrasion and impact loading, making it suitable for industrial and other heavy-duty floors. This has been specially formulated with non-rusting aggregate for increased abrasion resistance in areas subject to frequent moisture or water exposure.

Technical Characteristics

Abrasion Resistance (IS 1237) <ul style="list-style-type: none">• Normal Traffic*, @ 3 - 4 kg / m²• High Traffic, @ 7 - 9 kg / m²	2.5 mm wear loss 1.75 mm wear loss	Compressive Strength, 28 days, MPa (ASTM C 109)	69
Physical Appearance	Cementitious grey powder	Layer thickness, mm	2.5 - 3.0
Substrate temperature, °C	5 - 40	Density, kg / m ³	2500
Relative Humidity, % <ul style="list-style-type: none">• Minimum• Maximum	30 98	Ambient Air temperature, °C	5 - 40
		Surface Hardness, Mohs Scale (IS 13630 Part 13)	8 - 9

* Depending upon surface condition.

Field of Application

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

Advantages

- Maintenance free, dust proof. Only regular sweeping is required.
- Excellent wear / impact resistance.
- Non-staining, non-corroding.
- Cost-effective, long-life floor.
- Available in range of colours.
- Dense surface resists penetration of oil, grease etc.

Application Methodology

➤ Surface Requirement

- Ensure that base concrete has minimum cement level of 300 kg of cement per cubic meter of concrete and a slump @ 50 - 75 mm
- Ensure that compressive strength of concrete is 25 MPa minimal.
- Ensure that the thickness of surface is 15 cm minimum.
- Air entrant concrete is not suitable for dry shake hardener application.
- Use float or darby to level surface. To remove excess / bleeding water, drag surface with a burlap or sack.

- After the concrete has stiffened somewhat, open the surface by floating with hand wood or power float.
 - Ensure construction joints, expansion joints and floor joints are saw-cut only after 24 hours. When the slab has hardened, fill the joint with **ShaliSeal® PS**.
- **Application of Material**
- Remove bleed water of concrete before application of **ShaliFloor® M DH**.
 - Broadcast **ShaliFloor® M DH** as per the doses uniformly over the SSD conditioned surface.
 - For higher doses of application of **ShaliFloor® M DH**, two stage applications are to be followed dividing the desired quantity in the ratio of 50:50. Allow the first shake to remain unworked on the surface, until it has absorbed moisture and is of uniform in colour.
 - Second Stage: Immediately after first broadcast of **ShaliFloor® M DH**, apply second broadcast at right angles to the first one, making application to the edges first.
 - Use a low rpm mechanical trowel, held perfectly flat for compaction. If parts of the surface come loose or if the laitance rises, please allow concrete to harden till a thump pressed hard on to the surface leaves a print of about 3 - 5 mm depth.
 - Never add water to the surface for ease of trowelling.
 - Smoothing is to be done as the initial set is achieved with the same trowel machine running a low speed quipped with metal smoothing blades set at minimum angle.
 - If required, any final smoothing should be performed later with the machine running at higher speed.
 - **ShaliFloor® M DH** can be used in conjunction with vacuum dewatered concrete at maximum of 5 kg / m² spread rate.
 - Cure the broadcasted **ShaliFloor® M DH** floor with **ShaliCure® PA**.
 - While applying **ShaliFloor® M DH** at the edges of the concrete floor or, at the end of bays, extra precaution should be taken by way of sprinkling more material and finishing it smoothly with a steel trowel. This is an additional protection particularly to bay edges where the reaction due to heavy impact is more.
- **Construction of Wearing Top**
- Remove the old concrete surface to a depth of at least 5mm to 7mm and clear all loose particles and dust. In case of an oil soaked surface, the chipping should be done upto the oil contamination level, till clean and sound concrete is found.
 - This clean surface is to be thoroughly soaked with water for at least 12 – 15 hours prior to laying the concrete base and floor topping. No surface water should remain before the application of the cement slurry (with a suitable bonding agent) over the surface.
 - Apply the cement slurry over the entire surface and then lay the ordinary granolithic layer of 13mm to 19mm thickness over this using the **ShaliFloor® M DH** mix, to the required thickness. When this granolith layer is still wet, trowel off to a smooth, polished finish.

Limitation

- The use of supplementary cementitious materials is not recommended for use with a dry shake hardener.
- Proper curing and sealing is required.
- Do not apply **ShaliFloor® M DH** during strong wind or extreme dry weather.
- Do not use concrete where some cement has been replaced by fly ash, as this makes the mix sticky and less workable.
- Variation in concrete characteristics such as water content and cement quality may lead to slight colour variations.
- Dry shake hardeners give a finish to concrete with some colour variation across the floor due to the natural variability of the concrete onto which they are applied.
- To ensure optimum colour consistency, it is essential that the floor laying operation is as clean and protect from the environment as possible.
- Colour variation during the drying out period is normal.
- Every effort must be made to ensure an even application of **ShaliFloor® M DH**. Correct timing and trowelling techniques are essential.
- Saw the joints as soon as possible without spalling the concrete.

Cleaning & Maintenance

Clean tools and equipment with water before the material hardens

Health & Safety

- Avoid contact with skin / eyes, and avoid swallowing.
- Ensure adequate ventilation and avoid inhalation of vapour.
- Wear suitable protective clothing, gloves and eye protection.
- In case of skin contact, rinse with plenty of clean water, then cleanse with soap and water. Do not use solvent to clean the contacted area.
- In case of eye contact, wash with plenty of clean water and seek medical advice.
- If swallowed, seek medical attention immediately. Do not induce vomiting.

Packing

Available in 30 kg bag.

Storage

Store in a cool dry place, under shed, away from heat.

Shelf Life

6 months in original unopened sealed condition.



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