



# HS Tuff-Floor NM

Non-metallic mineral dry  
shake floor hardener



## Advantages

HS Tuff-Floor NM provides the following beneficial properties when applied:



**Good wear resistant rating**

**Impact resistance**



**Cost effective surface hardener**

**Dust proof**



**Easy cleaning**

**Increased resistant to oil and grease**



**Quality assured factory blending**

## Product Description

HS Tuff-Floor NM is a one-part, pre-blended, cement grey coloured mineral dry shake hardener for concrete comprising of cement, specially selected natural mineral aggregates, admixtures.

## Uses

Hard wearing, mineral dry shake topping for monolithic floors. When sprinkled and trowelled into fresh wet concrete floors, it forms a cement grey coloured wear resistant smooth surface. Typical uses are in wear-houses, factories, shopping malls, public areas, restaurants and museums.

## Layer Thickness

Approx. 2.5 to 3.0 mm at dosage 5.0 Kg/m<sup>2</sup>

## Application Detail

**Consumption:** For light duty 3.5 to 4.0 Kg/m<sup>2</sup>, For Medium Duty 4.5 to 5.0 Kg/m<sup>2</sup>, For Heavy Duty 5.5 to 6.0 Kg/m<sup>2</sup>

**Substrate Quality:** The concrete deliveries must be of consistent quality. A concrete slump in the range of 75 to 110 mm will normally give best results. The slab must be of good quality concrete with a minimum water/cement ratio consistent with the production of a fully compacted slab. The compressive strength must be a minimum of 20 N/mm<sup>2</sup>. Use of Berger range of super-plasticizers is advised to ensure the optimum quality of concrete and where fibres are used, their optimum dispersion within the mix. Air entrained concrete is not a suitable substrate for the application of dry shake.

## Application Conditions/Limitations

Substrate Temperature +5°C min/+35°C max, Ambient Temperature +5°C min/+45°C max, Relative Air Humidity 30% r.h. min/98% r.h. max

## Packaging:

30 Kg bags

## Shelf Life/Storage

12 months from date of production if stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5°C and +30°C

## Safety Instructions & Precautions

Accidental splashes onto skin must be washed off with water and soap. In contact with eyes or mucous membrane, rinse with clean warm water and seek medical attention without delay.

Ecology, Toxicity & Transport health & safety codes

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## BERGER PAINTS INDIA LIMITED

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## Important

The information given in this data sheet is based on experience and is correct to the best of our knowledge. However, since success of application of our products is dependent on number of factors, we only can be responsible for quality of our products at the time of dispatch. In the event of any doubt on any critical parameter, it is advisable to seek clarification from our technical personnel.

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## Application Instructions

### Application Method / Tools:

Dependent on the conditions, remove the surface bleed water or allow it to evaporate. Sprinkle HS Tuff floor NM on to the screeded concrete evenly in two stages (first stage : 60%; Second stage : 40%) Care must be taken to apply the product without creating ripples etc. in the concrete surface.

### Compaction:

The first application must be worked into the slab followed immediately by application of the second stage quantity of HS Tuff floor NM.

- Never add water to the surface where the dry shake has been applied
- HS Tuff floor NM results in the slab surface becoming "stiff" more quickly than usual. Careful trimming must take place along the edges where adjoining slabs are to be poured. Final finishing closing pores and removing undulations can be achieved either by hand or power trowel.

### Cleaning Tools:

Clean all tools and application equipment with water immediately after use. Hardened/Cured material can only be removed mechanically.

### Application Time:

Application time for dry shake products is influenced by every variable which affects the placing of concrete, and can therefore vary substantially, depending on the prevailing conditions. For mechanical application with automatic spreader and laser screed, the spreading can start almost immediately after the concrete has been levelled to allow for the hydration of dry shake. Compaction with the trowel can start as soon as the weight of the power trowels is supported by the concrete. For manual application, dry shake must be spread once the concrete can be stepped on, without leaving a print deeper than 3-5 mm. Periodical checking of the condition and development of the concrete will determine the correct time frame for each stage and sequence of application.

### Notes on Application/Limitations:

The application of the dry shake powder must not be carried out in strong wind or in dry conditions. Do not use concrete where some cement has been replaced by fly ash, as this makes the mix sticky and less workable. Variations in concrete characteristics such as water content and cement 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 protected from the environment as possible. Colour variation during drying period is normal for this system and is to be expected. Every effort must be made to ensure an even application of HS Tuff floor NM, correct timing and trowelling techniques are essential. At low relative humidity (below 40%), efflorescence can appear on the surface. At high relative humidity (above 80%), bleeding & slower curing and hardening can occur and extended finishing operation be required. For mechanical application – automatic spreader in conjunction with a laser screed: Spread HS Tuff floor NM evenly onto the concrete immediately after screeding in one application.

## Curing Detail

### Curing Treatment:

Cure and seal HS Tuff floor NM immediately after finishing using any of the products in HS Curecrete range. Joints After finishing operation and completing saw cuts, clean off any residual saw lubricant/slurry without delay. Joints can be filled with PU construction sealant from Berger or any other appropriate sealant in accordance with the floor design requirements.

### Applied Product Ready for us:

Substrate Temperature	27°C
Foot Traffic	Approx. 72 hour
Fully Serviceable	Approx. 7 days

The above values are dependant upon the concrete reaching its design strength for serviceability and will be affected by changing ambient conditions, particularly temperature and relative humidity.