

KEM FLOOR EM

Emery Based Dry Shake Floor Hardener

CCCFLR-02-1111

Description

KEM FLOOR EM is a pre-mixed emery based dry shake floor hardener which contains graded high quality Emery aggregates, Portland cement and special additives. The emery aggregate used are have excellent hardness and are chemically inert. This resists polishing and provides a non-slip skid resistant surface even in wet condition. Being nonmetallic, it will not rust.. KEM FLOOR EM is available in natural grey colour but special colours can be produced upon request for large orders.

Uses

KEM FLOOR EM is used to provide an extremely hard wearing, abrasion resistant monolithic surface to new concrete floors. It provides excellent non-slip characteristic, which allows use on wet areas and ramps without the danger of slipping.

KEM FLOOR EM is ideally suited for most industrial floors which are subjected to heavy traffic.

Typical areas are car parks, loading bays, warehouse floors, machine shops, workshops, factory floors.

Advantages

- Forms a monolithic floor topping on concrete floors.
- Provides an extremely strong, hardwearing, abrasion resistant and impact resistant surface.
- Resistant to oils and greases.
- Non-rusting
- Excellent non-slip properties.

Typical Properties

Abrasion Resistance:

When tested as per **ASTM 779**, procedure B, KEM FLOOR EM treated concrete has at least 3 times better abrasion resistance than the best untreated concrete floor.

Light Reflectance (to ASTM E97):

% reflectance Natural Grey 35%

Compressive strength:

100 mm cubes are made at 0.10 water powder ratio.

Typical Values:

Age (Days)	in (N/mm ²)
1	38
3	55
7	70
28	100

Hardness (Mohs scale): The emery aggregate used has a hardness of 9 on the Mohs scale.

Other physical properties of aggregate in KEM FLOOR EM (to **BS 812**)

Polished stone value	68.0
Aggregate abrasion value	1.9
Aggregate impact value	8.0
Aggregate crushing value	8.2

Special Features

KEM FLOOR EM contains high quality hardwearing aggregate which meets the requirement of Al₂O₃ as emery content is greater than 55%. Additionally the aggregate used is high quality Emery only.

Instruction for use

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. Water cements ratios of less all than 0.55 are required. The concrete should preferably have a slump of between 75 and 100 mm at the time of placement. 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. Vacuum dewatering is not



recommended when w/c ratios of less than 0.55 have been used.

Application: KEM FLOOR EM is applied at different rates per m² to provide floor surfaces suitable for different grades of industrial use.

Application rate kg/m² Intended traffic use

6-8.Heavy

5-6. Moderate

3-4 Light

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

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

KEM FLOOR EM is applied in two application stages.

a. First application is made using 1/2 to 2/3 of material required for the eventual end use.

KEM FLOOR EM 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 by wooden floats, or on large areas the disc of a power float may be used. It is important, however, that the surface is not over worked.

b. Immediately after floating the remaining KEM FLOOR EM, is spread 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 the blades of a power float can be carried out when the floor has stiffened sufficiently so that damage will not be caused.

Safety precautions

Timing of application: Timing of the application of the KEM FLOOR EM is important. If too early, excess water will be absorbed and resulting in poor strength and will be subject to dusting. Also the dense emery aggregate of KEM FLOOR EM could sink and be lost from the surface. If too late, insufficient moisture will be available to completely hydrate the KEM FLOOR EM. Cracking and pitting of the surface are likely to result.

Bay edges: Where bay edges are likely to suffer particularly heavy impact or wear these can be given additional protection. Immediately after the base concrete is leveled, sprinkle KEM FLOOR EM on a strip 100-150 mm wide along the bay edges. Steel trowel into the surface. Areas where saw-cut transverse control joints are located can also be pretreated in this manner.

Curing: Tests have shown that proper curing of concrete floors treated with products such as KEM FLOOR EM is essential to ensure the physical properties of the floor. The most efficient method of curing is to use KEM Cure Aid, curing membrane. However, in indoor applications where curing conditions are less demanding, alternative approved methods of curing such as polythene sheeting are acceptable.

Note: KEM FLOOR EM is supplied as ready-to-use on site. Never add cement or aggregates to KEM FLOOR EM.

Coloured Floors: When a coloured floor is required it is strongly to conduct a trail at site, to check the colour shade.

Storage

If kept in original, undamaged packing the shelf life of KEM FLOOR EM should be at least 12 months.

Fire resistance: KEM FLOOR EM is not flammable

Packaging

KEM FLOOR EM is supplied in 25 kgs bags.

Coverage

The coverage KEM FLOOR EM depends on the end use. The Application rates should comply with the coverage's recommended for that use to give the following yields:

Light traffic : 8 m²/bag 3kg/m²

Moderate traffic: 5 m²/bag 5kg/m²

Heavy traffic : 3½ m²/bag 7kg/m²



Health & Safety:

KEM FLOOR EM is non-toxic but is mildly alkaline. Gloves should be worn during application. Splashes to the skin or eyes should be removed with clean water. In the event of prolonged irritation, seek medical advice.

Chembond Chemicals Limited

Chembond Centre, EL-71, MIDC,
Mahape, Navi Mumbai, India 400 710.
Tel.: +91 22 39213 000 , Fax: +91 22 3921 3100.,
website:www.chembondindia.com,
e-mail: enquiries.conscheme@chembondindia.com

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