

Technical Data Sheet

FS-F-HARD

Non-Metallic Floor Hardener

DESCRIPTION

FS-F-HARD is a pre-mixed, factory-blended powder containing hydraulic binders and special wear-resistant mineral aggregates. It is applied as a dry shake over fresh, wet concrete to produce a dense, non-porous surface that is extremely hard-wearing and abrasion resistant. FS-F-HARD provides a slip-resistant surface that will not rust or disintegrate over time.

AREAS OF APPLICATION

- Loading bays and garages
- Car parks and ramps
- Storage rooms
- Mechanical workshops

Suitable for floors subject to heavy traffic that are not exposed to serious chemical attack.

FEATURES

- Hard-wearing and abrasion resistant — provides a highly durable floor
- Non-metallic — will not rust or stain
- Good monolithic bond with the base concrete
- Provides a non-slip surface
- Floor available for full service once the concrete has cured
- Dense surface — increased resistance to ingress of oil and grease

PHYSICAL PROPERTIES

(Values determined at 27 ± 1°C)

Hardness (Mohs Scale)	7 – 8 (Medium Duty)
Compressive Strength @ 28 days	> 50 N/mm ²
VOC Content	4.35 g/L

PACK SIZE

Available Size	25 kg
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APPLICATION RATE

Recommended dry-shake application rates by traffic category:

Traffic Use	Application Rate (kg/m ²)	Approx. Particle Size
Light	2.8 – 3.0	3.5 – 4 mm
Medium	4.7 – 5.0	2 – 3.5 mm
Heavy	6.8 – 7.0	< 2 mm

Application Instructions

BASE CONCRETE

The base concrete should have a minimum cement content of 300 kg/m³, with the mix designed to minimise segregation and bleeding. The concrete should ideally have a slump of 75mm.

The base concrete should be laid and compacted in accordance with good concrete practice. Following placement, it should be levelled off with a straightedge and vibrated. The surface is then floated with a wooden float, ensuring it is not closed. Any bleed water should be removed. Particular attention should be paid to bay edges and corners to ensure full compaction.

TIMING

The timing of FS-F-HARD application is critical. If applied too early, bleed or excess water will wash away the cementitious content of the product, making it ineffective, and the denser aggregates may sink into the concrete. If applied too late, there will not be sufficient water/moisture to absorb the material into the concrete — forcibly applying and trowelling material in this state will cause cracks on the surface later, as there is insufficient moisture to hydrate the product.

APPLICATION

FS-F-HARD is supplied ready to use on site. Cement or aggregates should never be added. It is recommended that the floor be marked off into bays of known area, with sufficient material laid out to meet the required spread rate.

Application can begin once the base concrete has stiffened to the point where light foot traffic leaves an imprint of about 3mm, and any bleed water has evaporated.

FS-F-HARD is applied in two stages:

- First stage: broadcast 60–70% of the material evenly onto the fresh concrete surface. When the material becomes uniformly dark from absorbing moisture from the concrete, float it into the surface using a wooden float so that it becomes an integral part of the concrete.
- Second stage: immediately after floating, sprinkle the remaining material evenly over the surface. Wait again for the material to become uniformly dark, then float as before. Final finishing with a power trowel can be carried out once the floor has stiffened sufficiently.

At bay edges and the ends of bays, take extra precaution by sprinkling additional material and finishing smoothly with a steel trowel — these areas experience greater impact and benefit from the additional protection.

CURING

Proper curing of concrete floors treated with FS-F-HARD is essential to achieve the intended physical properties. Curing should begin immediately after final trowelling, either by covering the surface with polyethylene sheeting or by applying a suitable Jenga concrete curing compound.

STORAGE & SHELF LIFE

FS-F-HARD has a shelf life of 12 months when stored in normal dry conditions.

PRECAUTIONS

Avoid contact with eyes and prolonged contact with skin. Take care to avoid inhalation or ingestion of dust, and wear a suitable dust mask and eye protection during handling and application. In case of eye contact, flush immediately with plenty of clean water and seek medical advice if necessary.

DISPOSAL & SPILLAGE

Any spilled material should be absorbed onto sand or other inert material and placed into a suitable container for disposal. Dispose of spillage and empty packaging in accordance with local waste disposal regulations.

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