



## TuffFloor MH

### Mineral Based Non-Metallic Floor Hardener

#### Uses

**TuffFloor MH** provides a highly abrasion resistant surface to fresh concrete floors by the dry shake method which ensures that the hard wearing surface bonds monolithically to the base concrete. It is ideally suited for all industrial areas subjected to heavy traffic such as Car parks, Heavy industry, Workshops, Laboratories, Power stations, loading bays, etc.

#### Typical Applications & Advantages

- Provides a hard, abrasion resistant surface.
- Reduces maintenance costs.
- Provides a hard, abrasion resistant surface.
- Supplied ready to use – no additives required.
- No stain, non oxidizing & non-metallic.
- Forms monolithic bond with fresh concrete base.
- Hard, dense surface resistant to oils and grease.

#### Product Description

**TuffFloor MH** is a factory blended, quality controlled powder which is ready to use on site. When applied as a dry shake application to concrete **TuffFloor MH** gives an extremely hard wearing, abrasion resistant and durable floor which will resist the ingress of aggressive liquids.

This is easy to trowel into the surface of fresh wet concrete and will cure monolithically, thereby alleviating the problems normally associated with thin granolithic toppings e.g. curling, cracking, shrinkage etc. **TuffFloor MH** combines with free water, cement and fine aggregates at the surface of the vibrated concrete to reduce the water/cement ratio and to increase density and compressive strength.

#### Typical Properties

<b>Appearance</b>	: Cement grey powder.
<b>Bulk Density</b>	: 1700 kg/m <sup>3</sup>
<b>MOHS hardness</b>	: 7

#### Technical Support

GIC provides a comprehensive technical support service to specifiers, end users and contractors and is able to offer on-site technical assistance.

#### Criteria for Application

The base concrete should have a minimum cement content of 320 kg/m<sup>3</sup> and a water/cement ratio between 0.4-0.5. There should be no segregation or bleeding and the base concrete should have an on-site slump of between 75 and 100 mm.

The use of TuffFloor concrete admixtures is recommended to produce the required concrete performance characteristics. Place base concrete in accordance with good concrete practice; particular care should be taken at bay edges and corners to ensure good compaction. Vacuum de-watering is not recommended

#### Instructions for Use

**TuffFloor MH** powder shall be applied to the freshly-laid concrete floor by the dry-shake method. **TuffFloor MH** should be applied at an even application rate of between 5-7kg/m<sup>2</sup>. It is recommended that the floor be marked off into bays of known area. Sufficient materials should then be laid out to meet the recommended spread rate.

Application of **TuffFloor MH** should begin without delay when the base concrete has stiffened to the point when light foot traffic leaves an imprint of about 3-6mm. Any bleed water should now have evaporated, but the concrete should have a wet sheen. On large floors it will be necessary to work progressively behind the laying team to ensure application at the correct time.

**TuffFloor MH** is applied in two stages.

The first stage of application is broadcast at an even rate of 3-4 kg/m<sup>2</sup> onto the concrete surface. When the material becomes uniformly dark by the absorption of moisture from the base concrete, this first application can be floated. Wooden floats or, on large areas, a power float,





**TufBond**

may be used. It is important however, that the surface is not overworked.

Immediately after floating, the second stage of application has to be started and the remaining 2-3 kg/m<sup>2</sup> of **TuffFloor MH** are applied evenly over the surface at right angles to the first. Again when moisture has been absorbed 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.

**Curing:** Curing should be carried out immediately after the final troweling operation has been completed. Cover with polyethylene sheets and water cure for 48 hours. Protect all surfaces from traffic until the surface has completely hardened or full strength has been achieved.

### Watch Points

- Application of **TuffFloor MH** should not take place in direct sunlight when hot & drying winds are blowing. This will avoid the surface drying out whilst the concrete is still wet and often results in cracking.
- Do not use **TuffFloor MH** in areas exposed to acids and their salts or other materials known to rapidly attack or deteriorate concrete containing Ordinary Portland Cement.
- Do not apply to concrete containing calcium chloride or concrete having greater than 3% air entrainment.

### Coverage

**TuffFloor MH** should be applied at the rate of 5-7 kg/m<sup>2</sup>. Along bay edges and joints apply at 0.5-1.0 kg per linear metre in strips of 80-100mm width.

### Packaging & Storage

**TuffFloor MH** is supplied in 25kg bags and it has a minimum shelf life of 12 months provided it is stored under cover, out of direct sunlight.

### Health & Safety Precautions

**TuffFloor MH** does not fall into the hazard classifications of current regulations. However, it should not be swallowed or allowed to come into contact with skin and eyes. Suitable protective gloves and goggles should be worn. Splashes on

the skin should be removed with water. In case of contact with eyes rinse immediately with plenty of water and seek medical advice. If swallowed seek medical attention immediately – do not induce vomiting.

For further information refer to the Material Safety Data Sheet available for this product.

### Important note

GIC endeavors to ensure that the technical information contained herein is true, accurate and represents our best knowledge and experience. No warranty is given or implied, as GIC has no control over the conditions of use and the competence of any labor involved in the application are beyond our control.

**As all GIC technical data sheets are updated on a regular basis it is the customer's responsibility to check that the product is suitable for the intended application, and that the actual conditions of use are in accordance with those recommended.**

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