

Emery based dry-shake mineral floor hardener

Product Description

TufFloor EH is a factory blended, quality controlled powder consisting of special hard-wearing emery aggregates, Portland cement and chemical additives. When applied as a dry shake application to concrete **TufFloor EH** gives an extremely hard wearing, abrasion resistant and durable floor which will resist the ingress of aggressive liquids.

TufFloor EH will trowel easily 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. **TufFloor EH** 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 Applications

TufFloor EH is ideally suited for use on all industrial floor areas subjected to heavy traffic i.e. power stations, abattoirs, loading bays, car parks, warehouses, engineering workshops, refineries, factories, agricultural buildings etc.

Advantages

- Economical & supplied ready to use.
- Excellent abrasion & slip resistance, reduces dusting.
- Forms monolithic bond
- No stain, non oxidising & non metallic
- Reduced penetration of aggressive liquids

Typical Properties

Appearance	: Cement grey powder.
Consumption	: 5 kg/ m ² - Medium 7 kg/ m ² - Heavy
pH	: 7.5
Compressive strength	: Approx. 70 N/mm ²
MOHS hardness	: 9*
Abrasion resistance	: Excellent
Flashpoint	: N/A
Adhesion to concrete	: Monolithic bond

* Test results for MOHS hardness are normally quoted within a range, in this case 8-9.

Design Criteria

In accordance with ACI 201-2R77 & 302-1R-89 recommendations, the concrete should have a minimum cement content of 320 kg/m³ and a water/cement ratio between 0.4-0.5. There should be no segregation or bleeding and the workability at site should ideally be 75mm slump. Micro-silica is not recommended to be used and air contents should be controlled to a maximum of 3%.

The use of **TufFlow** 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

Directions for Use

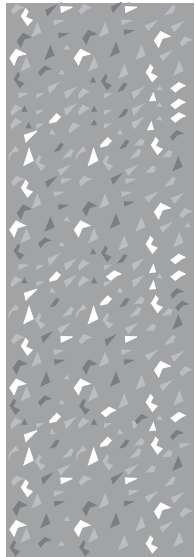
Concrete placement: The concrete should be placed, leveled and compacted following standard practices. The surface is then wooden floated to leave the surface open ensuring that there is no bleed water. **TufFloor EH** is normally applied 30-40 minutes after concrete placement. This time varies according to ambient temperatures. The surface must be neither too wet nor too dry and will normally allow foot traffic leaving imprints of no greater than 3mm.

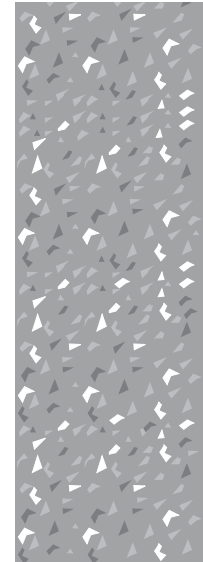
TufFloor EH is applied in three applications.

Initial application: **TufFloor EH** should first be applied along the bay edges and where expansion and contraction joints are to be located. Apply at 0.5-1.0kg per linear metre in strips of 80-100mm width.

Second application: Using raised trestles to span the slab, broadcast the first two thirds of the **TufFloor EH** by hand at a uniform rate. Allow to darken by absorption of moisture from the base concrete; lightly wooden float this material into the concrete. Care should be taken to ensure the surface is not overworked.

Third application: When the first application





has been troweled in, broadcast the remaining one third of the **TuffFloor EH** at right angles to the first. Allow to absorb moisture and float as above. When the sheen begins to leave the surface, use a power float to close the pores and completely level the surface. If the floor is to be finished by hand trowel ensure sufficient masons are available to complete the work prior to concrete hardening.

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. Thereafter curing may be done by using **TufCure Clear** or by conventional means. Protect all surfaces from traffic until the surface has completely hardened or full strength has been reached.

Subsequent coatings: These may be applied over the cured surface for chemical resistance, aesthetics or demarcation.

Watchpoint

- Failure to cure the concrete slab immediately and continuously after application will result in lower strengths and cracking of the surface.
- Application of **TuffFloor EH** 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. This often results in cracking.

Coverage Rates

TuffFloor EH should be applied at the rate of 5 kg/m². Along bay edges and joints apply at 0.5-1.0 kg per linear metre in strips of 80-100mm width.

Packaging & Storage

TuffFloor EH is supplied in 25kg bags and should be stored in dry, shaded warehouses in the same conditions as cement. When stored in dry conditions shelf life will be 12 months.

Health & Safety

As with all GIC chemical products, care should be taken to avoid contact with skin, eyes, mouth and foodstuffs. Treat splashes to eyes and skin immediately, by thorough washing with clean water. If ingested seek medical attention.

Other Polyurethane & Cementitious Industrial Flooring products available from GIC.

TuffFloor Shield- Tough, fast curing, scratch resistant decorative polyurethane coating.

TuffFloor Shield 22- Prepolymer urethane based sand stabiliser and sealer for interlocking blocks and paving tiles.

TuffFloor UniCrete- 6-9mm, high temperature, steam cleanable, heavy duty chemical resistant screed.

TuffFloor Silicate- Sodium silicate based concrete floor hardener and dustproof.

TuffFloor MH & EH – Mineral & Emery based surface applied dry-shake floor hardeners.

TuffFloor Non-slip Aggregates- Carefully selected, clean dry and graded hard-wearing aggregates for producing non-slip surfaces in conjunction with **TuffFloor** products.

TuffFloor Acrylic- Two component self smoothing cement based floor leveling compound.

Rev. Jan 2004.