

## HardTop® 200

### Pre-blended, dry shake surface floor hardener

#### Description

**HardTop 200** is a premium quality, factory pre-blended dry shake floor hardener. It should be applied using dry shake technique and troweled into fresh concrete floors.

**HardTop 200** will produce a dense and tough concrete floor. It provides continuous protection to concrete floors against wear, impact and abrasion. Also, it provides high resistance to various industrial chemicals, oils, greases, detergents and hydraulic fluids.

#### Features and benefits

- Pre-blended, offering factory-controlled quality assurance.
- Applied monolithically to fresh concrete. Forms an integral part of the floor surface and will not delaminate or peel.
- Wear, abrasion and impact resistance are superior to normal concrete.
- Suitable for internal and external applications.
- Provides maintenance free, long life performance floor.
- Economic, non-dusting, easy to clean floor.
- Smooth slip resistant surface or textured surface can be obtained.

#### Recommended for

**HardTop 200** is especially formulated to ensure improved durability in applications where the floor is subjected to medium and heavy traffic and where a non-dusting surface is required. It will improve performance of all concrete floors subjected to sever mechanical wear.

Typical floor applications are:

- Factories and workshops.
- Parking areas.
- Warehouses, loading platforms and shipyards.
- Petrol stations, cars' service centers and cars' washing areas.

- Power stations, water and waste water treatment plants.

#### Composition

**HardTop 200** is composed of high strength Portland cement, mineral aggregate, additives and pigments. The mineral aggregate used in manufacturing **HardTop 200** is hard, well graded, sharp with high physical and mechanical performance.

#### Packaging

**HardTop 200** is available in 25 and 40 kg bags.

#### Coverage

Typical applications can be from 3 – 7 kg/m<sup>2</sup>.

- Light – medium duty floors: 3 - 5 kg/m<sup>2</sup>.
- Heavy duty floors: 5 - 7 kg/m<sup>2</sup>.

#### Technical data

Powder density	1.8 kg/liter
Compressive strength	>50 N/mm <sup>2</sup>
Abrasion resistance	>200% improvement in abrasion resistance compared to control concrete*
Colors	Grey – brick red

#### Base concrete specification

Good concrete mix design is a major issue. The concrete floor should have the following minimum requirements:

Compressive strength: >250 kg/cm<sup>2</sup>

Cement content : >300 kg/m<sup>3</sup>

Air content : < 3%

Slump : 7.5 – 12 cm

Slab thickness : 10 cm minimum.

W/C ratio should be between 0.4-0.5. It should be kept at a minimum required value to achieve fully compacted concrete.

Proper concrete compaction and leveling is a must. If free water is present at the surface, it should be allowed to evaporate or brushed

away before the application of **HardTop 200**. The concrete type, the slab thickness and the amount of the steel reinforcement used in the concrete floor slab are very important design factors that will affect the overall performance of the concrete floor.

### Timing of application

Timing of **HardTop 200** application is critical. Adequate machinery, labor and material should be available to complete the whole area while sufficient concrete moisture is available. Applying **HardTop 200** before or after the proper application time can seriously affect the quality of the concrete floor finish. The right time to spread **HardTop 200** is when the surface is solid enough to carry the weight of a man leaving 3-5 mm deep recess.

In hot weather, ensure that the dry sprinkling is applied at the correct time especially under direct sunlight.

This will avoid forming hard outer layer (i.e., drying out the first 5-10 mm of the surface while the concrete floor is still wet). This may lead to tearing off the surface during troweling.

### Application

Broadcast the **HardTop 200** evenly over the surface of the base concrete. Where manual troweling is involved, application on in two stages is recommended. The first stage should be to apply two thirds of the coverage rate of **HardTop 200**, and allow the material to absorb moisture form concrete.

When a uniform dark color appears, indicating that the material is wet, **HardTop 200** should be troweled in, either by hand or using a power float.

Care should be taken not to over trowel. Use a low-speed power trowel and held it perfectly flat. Stage two is to apply the remainder of the coverage rate and to repeat troweling.

For large floor construction **HardTop 200** can be spread and troweled in one stage by mechanical means.

As soon as the concrete floor reaches initial set, smooth the surface using the same power trowel equipped with metal blades erected at minimum angle. Another option to finish the surface is manual finish using steel trowel or stiff broom (to obtain uniform broom finish surface). In this case finish with stiff broom in one direction for neat appearance.

### Curing

Good curing is essential. Curing should be carried out immediately after the final troweling operation has been completed. Always cure with tap water. Keep damp for 5 days. Cover the work with wet hessian covered with polyethylene sheet. Another alternative is to brush on two coats of **UniBond LX** as a curing membrane onto the concrete floor.

### Cleaning

Clean tools with water immediately after use. Hardened materials should be cleaned mechanically.

### Storage and shelf life

If stored unopened in a dry place at a temperature between +5°C and +30°C away from sources of heat and moisture, shelf life is 12 months from the date of manufacture printed on the pack.

### Health and Safety

This product contains cement which may cause skin irritation. It may cause allergic skin reaction and eye damage. Avoid breathing dust. Wear protective gloves, eye goggles and clothing. In case of skin contact, wash with plenty of water. In case of eye contact, rinse continuously with water for several minutes and seek medical attention. Dispose excess material to special waste collection point in accordance with local & national regulation. Keep out of reach of children.

For further information, please ask for Safety Data Sheet for this product.