

## PRODUCT DATA SHEET

### PRI FLOOR HARDENER



#### High Performance, Non - Metallic Concrete Floor Hardener

PRI BOND'S PRI FLOOR HARDENER is quality controlled, factory blended best quality ordinary portland cement, properly selected & graded washed composed with dried aggregates, polymer, additives & special hardwearing aggregates which have been selected for abrasion and wear resistant properties as well as shape and size. PRI FLOOR HARDENER cures monolithically to provide a dense, non-porous surface which is extremely hardwearing, abrasion resistant and impact resistance of concrete floor to allow heavy duty movements. Being non-metallic, it provides extra strength and an anti-skid surface which will never get rusted and disintegrate.



#### AREAS OF APPLICATION

- Agricultural buildings
- Aircraft Hangers
- Distillation plants
- Engineering workshops
- Heavy industry
- Heavy traffic areas
- Helipads
- Power stations
- Shipyards
- Warehouse floors, loading bays.

#### FEATURES & BENEFITS:

- Permeability - High impermeability compared to plain concrete under the same conditions.
- Wear resistance - Improves wear resistance of concrete.
- Adhesion - Forms monolithic bonds with fresh concrete & becomes an integral part of it.
- Abrasion resistance - Improves the abrasion resistance of concrete by 250%.
- Economics - Economical floor treatment improves abrasion, impact & other mechanical properties of concrete.
- Dust resistance - Improves dust generation resistance because of very smooth surface finish & hardness.
- Corrosion resistance - Non-ferrous aggregate, hence will not degrade due to rust in wet condition.
- Strength - Improves compressive strength of the treated surface.
- Ease of application - Pre-mixed powder, easy to dry shake & trowel.
- Easy and economical to apply.
- Forms monolithic bond with base concrete.

#### METHOD OF APPLICATION

• **Surface Preparation** : The base concrete should be of proper mix design without any floating of fine cement paste, no segregation & bleeding.

1. PRI FLOOR HARDENER should be applied at an even application rate of 5 - 7 kg/m<sup>2</sup>.

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2. After laying the concrete divide & mark the bays of equal areas. Dry shake uniformly the recommended dosage of material over the green concrete mended spread rate.
3. It is ideally applied to a surface, which is neither too wet nor dry. Recommended time period is 30 - 40 minutes at the temperature of 35°C - 40°C, after the base concrete has hardened enough to leaves light foot prints of about 3mm - 6 mm concrete should have a wet sheen.
4. On large floors it will be necessary to work progressively behind the laying team to ensure application at the correct time.
5. It is applied in two layers. Normally the first application is carried out at an even rate of 3 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 using wooden floats or, on large areas, a power float may be used. It is important, however, that the surface is not overworked.
6. Immediately after floating as above, the remaining 2 kg/m<sup>2</sup> of PRI FLOOR HARDENER is 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.
7. Final finishing of the floor can be done with a power float when the floor has sufficiently stiffened to with- stand the mechanical force.
8. Bay edges are likely to suffer particularly heavy wear or impact and where saw-cut transverse control joints are to be located, it is desirable to give these areas additional protection, by one of the following methods prior to full treatment of the entire surface.
9. Immediately after levelling the freshly placed concrete, PRI FLOOR HARDENER should be sprinkled by hand at a rate of 0.5 kg/lin.m (5 kg/M<sup>2</sup>) in a strip 100 mm wide along the bay edge and hard-trowelled into the surface.

### Cleaning

All tools & tackles are to be cleaned immediately after application with soap water solution.

### PRECAUTIONS & LIMITATIONS:

- The base concrete should have minimum cement content of 300 kg/M<sup>2</sup>, and an on-site slump of 75mm - 100 mm.
- For the best results, W/C ratio should be as less as possible.
- The concrete mix should be designed to minimize segregation and control bleeding, although some limited bleed is desirable to ensure sufficient moisture available to wet the PRI FLOOR HARDENER when it is first applied.
- Do not add additional water or dry cement during finish.
- For concrete with optimized W/C ratios, rate of broadcast will be max. 2kg/M<sup>2</sup> ÷ in 2 stages.

### Technical Information

Colour		Cement Grey
Hardness, Mohs Scale	ASTM C 944	8 – 9
Compressive strength, N/mm <sup>2</sup>	ASTM C 109	60
Application rate ( Kg/m <sup>2</sup> )		Avg. mear
7-Heavy Traffic	IS: 1237-1980	<2mm
5-Medium Traffic	IS: 1237 - 1980	<2 & <3.5 mm
3 Light Traffic		<3.5 mm & <4 mm
Chemical Resistance		Passes
Mineral Oils		Passes
Motor Oil		Passes
Mild Acids & Alkalis		Passes
Salts		Passes

## PRI FLOOR HARDENER

**COVERAGE:**

Light and Medium Duty - 5 kg / m<sup>2</sup>

Heavy - Duty - 7 kg / m<sup>2</sup>

**PACKING:**

20 Kg Bag.

**SHELF LIFE & STORAGE:**

Shelf life is 12 months from the date of manufacturing. Store in a cool & dry place in unopened condition.

