

## NON-METALLIC FLOOR HARDENER

### DESCRIPTION

Non-Metallic Floor hardener is a ready-to-use surface treatment for new concrete which imparts greater durability and longer service life to high-traffic concrete floors. The quartz-silica aggregate is a naturally compatible with concrete and provides a very hard, dense, abrasion-resistant surface. It has proven to produce 300% greater abrasion resistance than untreated concrete slabs.

Non-Metallic Floor Hardener combines with the available cement paste in the surface to form a tight, dense layer of highly abrasion-resistant silica particles. The additional Portland cement in the product reduces the water/cement ratio in the treated surface resulting in a much higher surface compressive strength. The special dispersing and water-reducing agents improve the workability and facilitate easy incorporation of the product into the concrete surface. Non-Metallic Floor Hardener applied as a dry-shake treatment over fresh concrete will help correct weak surface defects from migration of fines to the surface in rising bleed water and the resultant loss in surface strength and durability.

Non-Metallic Floor Hardener is recommended for hardening interior and exterior concrete floors and slabs where increased durability and abrasion resistance are desired. Typical uses include industrial floors and driveways, parking lots, loading docks and high traffic concrete surfaces. Non-Metallic Floor Hardener has been successfully used in bus and automobile garages, dry docks, manufacturing plants, hotels, hospitals, distribution facilities and industrial plants.

### Composition:

Non-Metallic Floor Hardener is a high-quality blend of carefully graded quartz-silica aggregate, selected Portland cement and special dispersing and water-reducing agents.

### Benefits:

- ◆ Provides greatly improved floor life.
- ◆ Cost effective, long-term performance.
- ◆ Provides, non-dusting, spall-resistant surface.
- ◆ Does not rust, ideal for wet environments.
- ◆ Easy-to-use dry shake application.
- ◆ Finished surface is uniform and doesn't need to be painted.

- ◆ Smooth, dense surface resists penetration of grease and oil.
- ◆ Prepacked - no field proportioning - precise mix assured.
- ◆ Produces an easy to clean, low maintenance floor which is resistant to most cleaners and surface scouring.

### LIMITATIONS

Non-Metallic Floor Hardener is a cementitious product. It should not be used in areas where exposure to acids or other chemicals which attack concrete can occur. Non-Metallic Floor Hardener is not recommended for use in areas subject to highly concentrated live loads, point impact loading or where steeled-wheeled vehicles will be operated. Use Metallic Floor Hardener where high impact and point loading will occur.

Note: Abrasion resistance of concrete floor slabs is also influenced by such factors as concrete compressive strength, aggregate durability, finishing methods and curing procedures. Non-Metallic Floor Hardener applied as a dry-shake treatment is a supplement to improve the abrasion resistance and durability of the concrete surface. It is not a remedy for unsound concrete placement procedures.

### COVERAGE

The coverage needed is determined by the end use of the floor. For optimum wear resistance and floor performance, select the maximum application rate.

#### **Warehouse or light manufacturing environment:**

40 to 60 lbs per 100 sq ft (18 to 27 kg per 9 m<sup>2</sup>)

#### **Intense or heavy traffic, heavy industrial conditions:**

70 to 100 lbs per 100 sq ft (32 to 45 kg per 9 m<sup>2</sup>)

### APPLICATION

Determine the amount of floor hardener required for each area at the needed application rate. Arrange the bags adjacent to the area to be treated to facilitate even coverage. The concrete should be allowed to stand after screeding and bull floating. This will give the bleed water time to come to the surface. The bleed water can be removed with a rubber hose by dragging it in a loop across the concrete surface or by allowing it to evaporate. Do not apply floor hardener into bleed water.

P R O D U C T   D A T A   S H E E T

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If a harsh or low slump concrete mix is used do not delay application of floor hardener. Float the concrete immediately prior to floor hardener application to open the surface. Use a wood float or wood bull float for this.

The floor hardener should be applied in two steps, often referred to as "shakes". Use a mechanical spreader or broadcast by hand approximately 2/3 of the required floor hardener evenly over the concrete surface. Allow the floor hardener to absorb available moisture until it wets out thoroughly. After the floor hardener darkens uniformly it should be floated into the concrete surface with a wood hand or bull float. Apply the remaining 1/3 of the floor hardener in a similar manner except at right angles to the first shake. Again allow the floor hardener to wet out thoroughly and then float it in using a wood hand or bull float. Avoid overworking the surface at this point to keep the floor hardener at the surface. Float the edges by hand using a wood hand float. A power float can also be used to float the floor hardener into the concrete surface; however, it is necessary to delay application until the concrete can support the power float and the operator.

After the concrete starts to stiffen, it should be periodically floated as long as any water comes up. When floating no longer produces any water sheen, begin troweling. Use a steel trowel or power trowel several times until the surface is hard and dense. Hard steel troweling improves abrasion resistance but may darken concrete surface. Apply a membrane-type curing compound immediately after completion of troweling.

## **CAUTION**

Skin may be sensitive to cement. Use of rubber gloves, dust masks, eye protection and other safety equipment is recommended. Avoid contact with eyes or prolonged contact with skin. If eye contact occurs, flush immediately and repeatedly with fresh water, then get prompt medical attention.

## **KEEP OUT OF THE REACH OF CHILDREN**

## **PACKAGING**

50 lb (22.7 kg) multi-wall bag with moisture-resistant liner.

## **WARRANTY**

ICS PENETRON INTERNATIONAL LTD. warrants that the products manufactured by it shall be free from material defects and will conform to formulation standards and contain all components in their proper proportion. Should any of the products be proven defective, the liability to ICS PENETRON INTERNATIONAL LTD. shall be limited to replacement of the material proven to be defective and shall in no case be liable otherwise or for incidental or consequential damages. ICS PENETRON INTERNATIONAL LTD. makes no warranty as to merchantability or fitness for a particular purpose and this warranty is in lieu of all other warranties expressed or implied.

User shall determine the suitability of the product for his intended use and assume all risks and liability in connection therewith.