

## Floor Hardener | Dry Shake

### DIRECTIONS FOR USE

#### **General Guidelines:**

The recommendations of the following topics should be carefully reviewed prior to the application.

- “Dry Shake Floor Hardeners” are formulated to be applied to properly designed, non air entrained concrete. Conditions such as high winds, low humidity or hot or cold weather require mix design changes and adjustments in application and/or finishing procedures.
- A well compacted, leveled sub-grade is required. The recommendations of ACI 360, “Design of Slabs on Grade”, should be followed.
- Calcium chloride or admixtures containing more than 0.05% chloride ions are not permitted for metallic dry shakes. Air content must be below 3% for all dry shakes.
- The correct number of bags shall be positioned on both sides of the slab placement prior to the start of each days concreting operation.
- Note: Colored (pigmented) dry shakes require special attention to achieve a uniform color. If the job involves placement of a colored dry shake, care should be taken with regard to the following:
- Delay application of the shake as long as possible to the get maximum color saturation at the surface of the slab.
- Apply the shake as evenly as possible and in two applications for maximum uniformity.
- Do not burnish the final trowel. Best appearance is achieved by hand troweling the final finish.

### IRON ARMORED JOINTS

These joints provide added wear resistance at joint edges increasing the serviceable life of the floor.

### FINISHING

Finish the dry shake to the desired texture. While the product can be finished to any texture consistent with concrete, maximum abrasion resistance will be realized with a hard, smooth steel trowel finish.

Do not add water to the surface during the finishing operation.

### CURING

Cure the dry shake as per instructions on the individual product’s Technical Data Sheet.

### TROWELING

Flat steel troweling followed by raised steel troweling is required for typical finishing. The troweling operation is similar to finishing a normal industrial floor.

### PLACING

The following directions and ACI 302 Guidelines should be carefully followed when applying dry shake floor hardeners.

Apply the product on well designed, non-air entrained concrete mixes at ambient temperatures. If unusual conditions exist, such as direct hot sun, high winds, low humidity or cold weather, care should be taken to protect the slab during dry shake placement. Ideally, the building walls and roof should be in place and the slab protected from the direct environment. If that is not practical, wind screens are recommended to reduce moisture evaporation during placement of the dry shake and the dry shake may be placed on to the plastic, fresh concrete earlier than normally recommended.

Check the specifications for the amount of hardener required per square meter, then stack the correct number of bags at each bay to be placed that day.

This is important because it gives the finishers a “gauge” for applying the correct amount of material.

After the above conditions have been met, proceed with work in the following manner:

After concrete is placed use a bull float or darby to level the surface. Remove any bleed water by dragging the surface with burlap or a rubber hose.

After the concrete has stiffened to the point of supporting floating operations, open the surface by hand floating or power floating. Normally, a finisher’s footprint of 6 - 9 mm in depth indicates that the slab is ready for power floating. Earlier floating of the slab edges by hand is strongly recommended since the edges will dry first.

For best results and uniformity of thickness, the hardener should be applied in two shakes using approximately two-thirds the total amount for the first shake. For applications above 9.8 kg/m<sup>2</sup>, use 3 shake applications.

Immediately after the slab surface has been opened by floating, apply the first shake in a uniform application by hand, spreader or other suitable method. The bay edges may be treated with more dry shake floor hardener. Use of a mechanical spreader is highly recommended because it gives the best results.

Allow the first shake to remain unworked on the surface until it has absorbed moisture and achieved a dark, uniform color. Then, float with hand or power float. Immediately after floating in the first shake, apply the second shake again placing the material on the edges of the slab first.

Apply the second shake and float in a like manner.

**Note:** Kapitell Technical Department may be consulted where applications involving over 7 kilos per sqm of hardener require power floating