

**MASTERCRON® F<sub>F</sub>**  
*Mineral aggregate dry shake surface hardener  
and flatness enhancer for flat and superflat floors*

**APPLICATIONS:**

- Areas where a designated flatness is specified
- High stack vehicular traffic routes
- Warehouses and distribution centers
- Aisles and turnarounds
- AGV aisles
- Shipping/receiving areas

**NOTE:**

- Do not add cement, sand, aggregate or admixtures.
- Store in a dry place.
- Do not use if bag is damaged.

**IMPORTANT: READ THIS FIRST**

Master Builders does not warrant the performance of this product unless the instructions of this document and other related Master Builders documents are adhered to in all respects.

**PRE-JOB CONSIDERATIONS:**

It is required that a 10 ft x 10 ft (3 m x 3 m) test application be made in order to become familiar with product characteristics and application procedures.

**DIRECTIONS:**

NOTE: These steps have been found to be an effective method of applying MASTERCRON F<sub>F</sub> dry shake surface hardener to achieve a “flat” (F<sub>F</sub> 25+) floor while maintaining abrasion resistance in the range that is typical for the respective (MASTERCRON®) dry shake product. However, ideal characteristic results of these, or any construction product, are highly dependent upon ambient conditions, adequate labor, proper equipment, etc.

Arrange to have a pre-job conference with your local Master Builders representative to discuss all aspects of the dry shake application, specified flatness, etc. At that time, it is required that a copy of the proposed mix design be given to your Master Builders representative. Cement, aggregate size, aggregate gradation, admixtures, etc. can all affect set time, flatness achieved and ability of the dry shake to be sufficiently incorporated into the slab.

**PREPARATION:**

**PREPARING THE BASE CONCRETE:** Place, pump or otherwise convey the base concrete at a slump that is not in excess of 5 in. (12.7 cm) for a slab on grade and 3.5 in. (8.9 cm) for a suspended slab. Employing a vibrating or laser-controlled screed as the first phase of flattening is strongly advised.

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If desired or specified, follow the screed with a highway straightedge with the handle rigged so that the straightedge rides on the broader (6 in. [15 cm]) surface. Push the straightedge out and back one or two times only to further flatten the plastic slab.

**RATE OF USE:**

Use MASTERCRON F<sub>F</sub> at a rate of 1.0 to 2.0 lb/ft<sup>2</sup> (4.9 to 9.8 kg/m<sup>2</sup>). For specific application rates, refer to the project specification or consult your local Master Builders representative to discuss particular needs.

**SHAKE APPLICATIONS:**

If more than 1 lb (0.4 kg) total shake will be applied, conduct in two applications. Half of the total amount should be applied and integrated on the first application, and the remaining half on the second application. Following the use of the highway straightedge and when no excessive bleed water is remaining of the surface, apply up to 1 lb/ft<sup>2</sup> (0.4 kg/m<sup>2</sup>) of MASTERCRON F<sub>F</sub>. NOTE: The most efficient, economical and precise method of applying a dry shake is with the use of an automatic spreader. If excessive bleed water is present, wait until the surface has lost its sheen or remove standing water with a bullfloat or by other approved method.

Allow the shake to absorb moisture, then incorporate the dry shake into the surface of the slab with a wooden bullfloat or highway straightedge. A heavy wooden bullfloat is preferable as it tends to open the slab rather than closing it off and causing the possibility of trapping water under the dry shake layer. When using highway straightedge, attach a continuous wood strip to the area which will come in direct contact with the MASTERCRON F<sub>F</sub> surface. To maintain flatness, avoid shaking the bullfloat or straightedge handle. If shake is being applied in two application steps, repeat above application method with remainder of shake.

**FLOATING THE SURFACE:**

Leave the slab untouched until the surface has lost its sheen and it can support the weight of a finisher and a finishing machine. At this point, conduct the first floating of the surface. NOTE: All moisture used to incorporate shake material must come from within the slab. Under no circumstances should water be applied to aid in the incorporation of MASTERCRON F<sub>F</sub>. Under severe or rapid drying conditions, however, the use of CONFILM® Evaporation Reducer sprayed onto the MASTERCRON F<sub>F</sub> according to label instructions is recommended to prevent rapid moisture loss.

**RE-FLATTENING THE SURFACE:**

Turning the highway straightedge "on edge" so that the 2 in. (50 mm) edge is addressing the slab, push the straightedge out and back to flatten any "troughs" that the mechanical floating may have caused. SAVE ANY SURFACE MATERIAL THAT IS BROUGHT BACK TO THE EDGE OF THE SLAB BY THE STRAIGHTEDGE TO BE USED TO FILL IN LOW SPOTS.

**FLATTENING EDGES:**

Flatten, smooth and finish edges with short magnesium straight edge or wooden 2 in. x 4 in. (50 mm x 100 mm). This can be conducted in the same way that a hand darby would be used.

**FINAL TROWELING:**

When appropriate, conduct 2 to 3 mechanical trowelings. On first troweling, keep trowel blades as flat as possible without digging into the surface. As the surface "tightens" further, the trowel blades may be gradually raised to produce the desired surface finish. Follow with a final burnished troweling if desired.

CAUTION: A burnished troweled finish may be slippery when wet.

**CURING:**

PROPER CURING IS VERY IMPORTANT. DO NOT WET CURE A DRY SHAKE SURFACE HARDENER SURFACE. Apply MASTERKURE® or MASTERKURE® 200W curing compound as soon as possible without marring the surface of the finished floor. Use an approved Master Builders membrane curing compound in strict accordance with the label directions.

**PRECAUTIONS:**

- Do not use -
  - where operating and service conditions dictate the use of metallic aggregate surface hardeners.
  - on areas exposed to acids, their salts or to other materials known to attack or deteriorate portland cement concrete.
  - where resistance to struck sparks on the surface is desired.
  - over concrete containing added calcium chloride or concrete containing aggregate which has been saturated with salt water.
  - over concrete containing more than 3% air content per ASTM C138, ASTM C173 or ASTM C231.
  - over superplasticized concrete.
- Wood hand floats are preferred over magnesium hand floats.
- During the finishing operation, if any blistering occurs, flatten trowel blades immediately. Delay raised troweling until no blisters occur.
- Consult your Master Builders representative to approve mix design and additives.
- If at all possible, place concrete floors under roof. Job conditions that influence surface drying and setting time of concrete also affect the timing of the hardener application and finishing procedures.

**NOTE:** Unvented flue and exhaust gasses from heaters and equipment can cause a carbonated floor surface. This results in a weak and potential dusting surface. Proper ventilation must be provided.

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