

MASTERPLATE® F_F
*Metallic 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
- High traffic 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 MASTERPLATE F_F dry shake surface hardener to achieve a “flat” (F_F 25+) floor while maintaining abrasion resistance in the range that is typical for the respective (MASTERPLATE) 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: Pump, place 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 not in excess of 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.

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.

IRON-ARMORED JOINTS: If iron-armored joints are specified, use the following recommended procedure: The concrete at the joints to be armored should be removed to a depth of 1/2 in. (13 mm) at the joint line and tapered back to the surface level over 4 in. (10.2 cm) width. Mix the MASTERPLATE F_F with enough water to produce a stiff mortar. Hand float the area where the concrete has been removed, working up sufficient paste at the surface to assure an integral bond. Immediately place the MASTERPLATE F_F mortar into the prepared joint, then rescreed the area as explained above. (Use 2.25 lb [1.0 kg] per lineal ft. [30 lineal cm] for one side of the joint; and 4.5 lb [2.0 kg] per lineal ft. [30 lineal cm] for both sides of the joint).

RATE OF USE:

Use MASTERPLATE F_F at a rate of 1.0 to 3.0 lb/ft² (4.9 to 14.6 kg/m²). Up to 1.5 lb/ft² (7.4 kg/m²) maximum may be spread on the first pass by an automatic spreader, by hand or by square tip shovel.

For your specific application rate, refer to the project specification or consult your local Master Builders representative to discuss your particular needs. ALSO, where an even greater thickness of iron armoring is needed for increased abrasion and impact resistance (more than 3.0 lb/ft² [14.6 kg/m²]), and for special treatment at joints or for unusual applications, again, contact your local Master Builders representative for assistance.

SHAKE APPLICATIONS:

If more than 1.5 lb (0.7 kg) total shake will be applied, conduct in two applications. When possible, two-thirds of the total amount should be applied and integrated on the first application, and the remaining third on the second application. Following the use of the highway straightedge, and when no excessive bleed water is remaining on the surface, apply up to 1.5 lb/ft² (0.7 kg/m²) of MASTERPLATE F_F. 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 Masterplate F_F surface. To maintain flatness, avoid shaking the bullfloat 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, evaporation retarders or finishing agents be applied to aid in the incorporation of MASTERPLATE F_F. Under severe or rapid drying conditions, however, the use of CONFILM® Evaporation Reducer sprayed onto the MASTERPLATE F_F 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 ANY LOW SPOTS.

FLATTENING EDGES:

Flatten, smooth and finish edges with a short magnesium straightedge 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 —
 - on areas where floor surfaces will be exposed to acids, their salts or corrosive materials which seriously and/or rapidly attack cement and/or iron.
 - over concrete containing added calcium chloride or concrete containing aggregate which has been saturated with salt water.
 - over concrete containing more than 3% entrained air.
 - over superplasticized concrete.
- Wood hand floats are preferred over magnesium hand floats.
- During the finishing operation, if any blistering occurs, flatten trowel blades immediately. Refloat to “open” floor and remove blisters. Delay raised troweling until no blisters occur.
- Place concrete floors under roof, if at all possible. Job conditions that influence surface drying and setting time of concrete also affect the timing of the hardener application and finishing procedures.
- Consult your Master Builders representative to approve mix design and additives.

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

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