

QUARTZPLATE FF™

Quartz Mineral Aggregate, Dry Shake Surface Hardener with Flatness Enhancer

MANUFACTURER

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PRODUCT DESCRIPTION

QUARTZPLATE FF is a ready-mixed, scientifically graded, 98% pure quartz silica aggregate, dry shake hardener. It has been specifically engineered for early application to concrete floors that are designed to conform to a specific floor flatness designation as outlined in ACI 117 and ASTM E-1155.

QUARTZPLATE FF can be applied over freshly placed concrete of a single course concrete floor or over the freshly placed concrete topping of a bonded two course concrete floor system. The thickness of the bonded overlay must comply with the requirements of ACI 302. QUARTZPLATE FF has been formulated to allow application by a single pass of a material spreader of up to 1 lb./ft² (5 kg/m²).

Basic Use: QUARTZPLATE FF offers rust-free and stain-free, durable performance in factories, warehouses, distribution centers, jails, prisons, aisles and turnarounds, commercial buildings and areas where a designated flatness is specified.

FEATURES & BENEFITS

- 98% hard silica aggregate.
- Virtually dust free surface.
- Ability to be broadcast onto a highly plastic slab to achieve a flat or superflat concrete floor.
- Scientifically graded aggregate and proprietary admixtures allow this product to be easily finished, resulting in a less labor and time intensive product.
- Surface is more than four times greater abrasion resistant than high strength concrete.
- Denser surface to reduce maintenance and reduce contaminant, grease and oil penetration.
- Available in Natural, Light Reflective and nine attractive colors.

ESTIMATING

QUARTZPLATE FF is available in 55-pound (25-kilogram) multi-walled polyethylene reinforced bags. The standard application rate of Natural QUARTZPLATE FF dry shake surface hardener is 1-1½ lb/sq.ft (5-7 kg/square

meter). The recommended application rate for colors is 1¼-1½ lb/sq.ft (6-7 kg/meter²). Consult your local L&M representative for a specific recommendation to meet your individual needs.

INSTALLATION

QUARTZPLATE FF may be placed by one of two methods: The standard ACI 302 method or the method for flat and super flat floors. For specific instructions, see the *L&M Dry Shake Surface Hardener Installation Guide*.

The Standard ACI 302 Installation Guidelines

- This method can be used if the QUARTZPLATE FF is to be placed by hand or using a material spreader.
- Screeding and fill floating (bull floating) shall take place before the emergence of bleed water. Bull floating should be kept to a minimum and used only to cut and fill.
- After *excess* bleed water has evaporated or been removed, leaving *sufficient* moisture at the surface to hydrate cement binders in the QUARTZPLATE FF, evenly distribute approximately 2/3 of the hardener specified for the area. If the hardener breaks through the surface when being applied, the concrete is too plastic for product application.
- When the material darkens slightly from absorbed moisture, it should be floated, using hand wooden floats or finishing machines with detachable float shoes (*do not use combination float and trowel blades*). Care should be taken not to tear through the surface of the hardener to the underlying concrete. ***Do not apply more hardener until moisture from the underlying concrete has been worked completely through the hardener.***
- Immediately apply the remaining 1/3 of the specified amount of hardener at right angles to the first application. ***The moisture from the underlying concrete must be completely worked through the hardener. If this does not occur, the floor surface will delaminate.***
- Allow to darken from moisture and float as before.
- After the concrete has further stiffened, it should be machine or hand troweled to a blemish free finish. Care should be taken not to trowel-burn the surface.

CURING

Apply DRESS & SEAL WB 30, protective membrane cure, in strict accordance with the label directions after final troweling and surface water glaze has disappeared. In areas where subsequent treatments, such as SEAL HARD, are scheduled, consult your local L&M representative for specific curing recommendations. **Do**



not wet cure QUARTZPLATE FF by ponding water for the first 24 hours.

FOR BEST RESULTS:

Follow ACI recommended guidelines for concrete floors. Do not use where operating and service conditions dictate the use of **EMERYPLATE FF** or **FERROPLATE FF**. Do not use where resistance to struck sparks on the surface is desired, or on areas exposed to acids or other materials known to attack portland cement.

- Do not place over dry subgrade, water sheen should be visible.
- The concrete used in the floor should have a slump of 4 to 5 inches and the total air content must not exceed 3 percent. If a high range water reducer is used the minimum ssd (total) water content of the concrete mix should not be below 33 gallons per cubic yard (163 L per cubic meter).
- Air entraining agents shall not be used. Admixtures, aggregates, and mixing water that contain chlorides shall not be used in concrete that is to receive **QUARTZPLATE FF**. If admixtures are used in the concrete caution should be exercised.
- If blisters form during the finishing operation they must be immediately ruptured before continuing the finishing operation. The formation of blisters is caused by premature closing of the concrete slab. If blisters occur, the blades of the finishing equipment must be set at a flatter angle with respect to the surface of the concrete slab.
- The primary cause of delamination is premature closing of the concrete slab. Premature closing is caused by the float or trowel blades being set at too great an angle with respect to the surface of the concrete slab. This can be prevented by holding the slab open and by delaying the final troweling as long as possible. Keep the angle of the blades of the finishing equipment as flat as possible during all stages of the finishing operation.
- Wood floats are preferred over magnesium hand floats. L&M is not responsible for diluted or mottled color resulting from careless or improper shake application, finishing, curing or failure to protect finished floor from damage by construction trades.
- Unvented flue and exhaust gasses from heaters and equipment will cause a carbonated floor surface. This results in weak and potentially dusting surfaces. Proper ventilation must be provided.
- Job conditions that influence surface drying and setting times of concrete may affect the timing of the hardener application and finishing procedures.

PRECAUTIONS

QUARTZPLATE FF contains portland cement and quartz silica. Do not add cement, sand, aggregate or admixtures to **QUARTZPLATE FF**. Avoid creating and inhaling dust. Dust mask recommended. Wear skin and eye protection. Please refer to Product Material Safety Data Sheet (MSDS) before using.

STORAGE/SHELF LIFE

QUARTZPLATE FF bags are to be kept in dry storage to prevent water contamination. Shelf life is 18 months in unopened bags.

TECHNICAL SERVICES

L&M recommends that the user request the service of the local representative for a pre-job conference to carefully plan each step of the installation. However, proper application is the responsibility of the user. Field visits by L&M personnel are for the purpose of making technical recommendations only and will not include supervision or provide quality control of application procedures or engineering details.

WEBSITE

L&M's convenient internet website offers instant access to Tech Data Sheets, Material Safety Data Sheets, product updates, and other useful information. Visit www.lmcc.com and follow the easy steps. L&M is ready to respond to your concrete information needs - anytime - anywhere!

SHORT SPEC

033000: Mineral Aggregate Reinforced Concrete Floor. Natural Quartz Aggregate ready-mixed with portland cement, minimum 1.0 lbs/sq.ft. (5 kg/m²). Colors 1.5 lbs/sq.ft.(7 kg/m²) color selected by designer. **"QUARTZPLATE FF"** by L&M Construction Chemicals, Inc.

LIMITED WARRANTY

This product is warranted to be free of defects in material and workmanship, and conform to L&M Construction Chemicals ("L&M") quality control standards. All recommendations, statements and technical data herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty or guaranty of any kind, expressed or implied including but not limited to, an implied warranty of merchantability or an implied warranty of fitness for a particular purpose. Satisfactory results depend upon many factors beyond L&M's control. User shall rely on his or her own information and tests to determine suitability of the product for the intended use and user assumes all risk, loss, damage, expense and liability resulting from his or her direct use, indirect use or consequential to their use of the product. L&M shall not be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use or inability to use the product. L&M's sole responsibility shall be to replace that portion of the product which proves to be defective. Any warranty claim must be made within six (6) months from the date of the claimed breach. This limited warranty applies only if the product was properly installed and used according to all instructions and was properly stored prior to use.

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