



*FLORUNDUM

Decorative Marble Aggregate Dry Shake Floor Hardener

1. Product Description

a. **Basic Use:** Florundum is intended for use as a dry shake surface hardener on fresh concrete to provide a decorative and durable floor surface in retail, commercial, institutional and residential grade facilities. It is applied on the surface of freshly placed concrete during normal floor finishing operations with standard finishing equipment. Florundum will provide a terrazzo like appearance after it is diamond abraded and polished using the Retroplate system.

b. **Features/Benefits:**

- Provides a terrazzo like floor surface at a substantially lower cost compared to conventional terrazzo.
- Formulated with marble aggregate to provide a decorative appearance on polished floors.
- Twenty nine standard and architectural colors provide a distinctive appearance with many design possibilities.
- Decorative floor surface also provides high strength for superior wear resistance and durability.
- Easily works into the surface of fresh concrete for complete, monolithic integration.
- Hard, non-dusting surface makes floor cleaning and maintenance easier and faster.

c. **Typical Applications:** Retail and commercial buildings, schools, lobbies, locker rooms, laboratories, prisons, airport terminals, restaurants, churches, institutional facilities, shopping centers, theaters, healthcare facilities and amusement parks.

d. **Limitations:** Florundum should not be used in areas subject to acid spillage or other chemicals which attack portland cement.

e. **Composition:** Florundum is a blend of a specially graded marble aggregate, portland cement, custom pigments, high range water reducing admixtures and a proprietary chemical system.

f. **Color/Appearance:** Florundum is available in a variety of base colors with decorative marble aggregate. Florundum will have the final appearance of a terrazzo floor after diamond polish grinding and polishing.

2. Packaging

Florundum is packaged in 50-lb. (22.7 Kg) moisture resistant bags, 60 bags per pallet. Shelf life is 12 months with proper storage and protection.

3. Estimating/Coverage

Florundum has a normal usage rate of 1.75 psf (8.6 Kg/sq. m). The following table may be used for coverage.

<i>Application Rate</i>	<i>Coverage Per Bag</i>
<i>1.75 psf (8.6 Kg/sq. m)</i>	<i>28.6 sq. ft. (2.7 sq. m)</i>

4. Technical Data

a. **Applicable Standards:**

- ACI 302.1R-96, Guide for Concrete Floor and Slab Construction.
- ASTM C 779, Standard Test Method for Abrasion Resistance of Horizontal Concrete Surfaces.

b. **Compressive Strength:** ASTM C 109, 2 in. (50 mm) cubes.

<i>Age</i>	<i>Strength</i>
<i>1 day</i>	<i>4,000 psi (28 Mpa)</i>
<i>3 days</i>	<i>6,000 psi (43 Mpa)</i>
<i>7 days</i>	<i>8,000 psi (57 Mpa)</i>
<i>28 days</i>	<i>10,000 psi (71 Mpa)</i>

c. **Wear Resistance:** ASTM C 779, Procedure A; 0.060 in. (1.5 mm) at 60 minutes.

5. Directions for Use

(Follow basic ACI 302 guidelines)

a. **Preparation:** Subgrade should be well compacted and graded to proper elevation. If a vapor barrier is used, it should not be placed over the subgrade but rather a minimum of 3 in. (76 mm) under the compacted fill. Vapor barriers will aggravate finishing problems and can contribute to slab curling. Forms should be set strong and true. Strip placements are preferred over checkerboarding. Place under roof whenever possible.

*Patent Pending

b. **Tolerances:** Specified floor tolerances are very important to ensure a flat and level Florundum floor surface. It is recommended the concrete surface after final troweling should have a F_F 40 rating or greater and a F_L 25 or greater.

c. **Concrete:** Concrete mix must be non-air-entrained for hard troweled floors or pavements. Concrete must contain enough water to properly wet out the dry shake under the job site conditions, normally a 3-1/2 in. (89 mm) to 4-1/2 in. (115 mm) slump without considering the influence of admixtures. Place the concrete, and screed into place, flush with the top of form. Bull float to smooth surface and fill low spots. (Note: On floors where high tolerances are required or where the tolerance is specified by "F" numbers, a check rod or highway straightedge may be desirable in lieu of bull floating. See ACI 302R-96.)

d. **Shake Application:** Ideal shake application should take place after the initial floating of the base concrete using a power trowel with float shoes. However, other site conditions such as no roof, wind, low relative humidity and/or low concrete water content may dictate earlier application. Apply Waterhold to help prevent rapid moisture loss. Each bay of the placement should have the proper number of bags pre-placed along the slab for accurate coverage. Remove any significant free standing bleed water with a dragged rubber hose prior to shake application. Apply 2/3 of the total shake evenly and uniformly over the slab surface. Mechanical spreader application is preferred but hand or shovel methods can also be effective. Float the shake into the slab surface after it has wetted out. Follow immediately with the remaining 1/3 of the shake and repeat the procedure.

e. **Finishing:** Once the shake is applied and integrated, normal floating and troweling operations can proceed as the slab sets. The best floor surface is achieved with a burnish trowel. However, colored shake floors should be finished just short of a burnish trowel to prevent discoloration from blade friction. Apply as many trowel cycles as necessary to get desired finish.

e. **Curing and Sealing:** Curing and sealing are very important to assure proper hydration and surface strength. Florundum is designed to be polished to expose the marble aggregate and is best water cured or cured with a sacrificial curing agent which is removed by the polishing process. If a sacrificial curing agent is specified, Seal N Kure FDR is recommended.

f. **Joints:** Contraction joints are normally sawcut into the floor to a depth of 1/4 of the slab thickness for crack control. Construction joints are a natural consequence of the forming operation. Both types should be filled with Jointfill 302 epoxy after a minimum 3 month wait (according to ACI 302, Sect. 4.10). Isolation joints and expansion joints (around column blockouts and at walls, for example) should be filled with Vulcanox urethane to allow adequate movement.

g. **User precautions:** Dry shake applications can generate free, airborne dust. Wear protective dust masks. Florundum contains portland cement. Gloves should be worn during application to prevent cement burns and skin irritation.

h. **Maintenance:** Florundum is intended to be free of maintenance once properly installed. Florundum floors should be cleaned with standard high alkaline floor cleaners and power scrubbers.

6. Availability

Florundum is normally available immediately from your local distributor or it will be shipped within 5 working days upon receipt of order. Please contact your local Metalcrete representative or call Metalcrete directly for more information.

7. Warranty

Florundum is manufactured in strict accordance with the quality control standards of Metalcrete Industries. It is guaranteed to perform as indicated on this data sheet when applied by competent applicators.

8. Technical Service

Metalcrete technical service representatives are available to provide on-site assistance with advanced notice.



Metalcrete Industries

4133 Payne Avenue • Cleveland, Ohio 44103
440-526-5600 • 800-526-5602 • FAX 440-526-5601