

This section is written to reflect the strict requirements of L & M Construction Chemicals, Inc. PSD will accept another material if equal specifications can be met (i.e.: 1800 polish, penetrating stain, etc).

1. Rilem Test Method 11.4 Standard Measurement of Reduction of Moisture Penetration through Horizontal Concrete Surfaces.
2. INSTALLER
  - A. Not less than 3 years experience

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- B. Member of the CPAA (Concrete Polishing Association of America)
  - C. Trained and holding current certification for FGS PermaShine installation.
  - D. Must have a 36 inch or larger with 20 horse power or more grinder with a walk behind or ride on floor scrubbers – as needed to properly do the work.
  - E. No dumping of concrete into slurry pit will be acceptable. May have to own a slurry separator. Legally dispose of slurry which is to put into a concrete slurry separator and made into a solid and then disposed into a trash bend. The clean water than comes must be made to a PH below 9 and above 6
3. Mock-Up:
  - A. Mock-Up Size: [100 ft<sup>2</sup> (9.3 m<sup>2</sup>) sample panel at jobsite.
  - B. Mock-up will be used to judge workmanship, concrete substrate preparation, operation of equipment, material application, color selection and shine.
4. Performance
  - A. Abrasion Resistance: ASTM C779, Method A, high resistance, no more than 0.008 inch (0.20 mm) wear in 30 minutes.
  - B. Reflectivity: Increase of 35% as determined by standard gloss meter.
  - C. Waterproof Properties: Rilem Test Method 11.4, 70% or greater reduction in absorption.
  - D. High Traction Rating: NFSI 101-A, non-slip properties.
5. Protect concrete slab.
  - A. Protect from petroleum stains during construction.
  - B. Diaper hydraulic power equipment.
  - C. Restrict vehicular parking.
  - D. Restrict use of pipe cutting machinery.
  - E. Restrict placement of reinforcing steel on slab.
  - F. Restrict use of acids or acidic detergents on slab.
  - G. Fork Lift Tires need to be covered in order not to have sheet rock nails in tires which will scar concrete slab.
6. NFSI Test Method 101-A Phase Two Level High Traction Material. System must be certified by the NFSI for a Certified High Traction Floor.
7. Spec written to reflect the strict requirements of L & M Construction Chemicals, Inc. PSD will accept another material if equal specifications can be met (i.e.: 1800 polish, penetrating stain, etc).
8. Materials
  - A. Hardener, Sealer, Densifier: Proprietary, water based, odorless liquid, VOC compliant, environmentally safe chemical hardening solution leaving no surface film.
    1. Acceptable Material: L & M Construction Chemicals, Inc., FGS Hardener Plus.
  - B. Joint Filler: Semi-rigid, 2-component, self-leveling, 100% solids, rapid curing, polyurea control joint and crack filler with Shore A 80 or higher hardness.
    1. Acceptable Material: L & M Construction Chemicals, Inc., Joint Tite 750.
  - C. Concrete Dyes: Fast-drying dye packaged in premeasured units ready for mixing with VOC exempt solvent; formulated for application to polished cementitious surfaces.
    1. Acceptable Material: L & M Construction Chemicals, Inc., Vivid Concrete Dyes.
  - D. Cleaning Solution: Proprietary, mild, highly concentrated liquid concrete cleaner and conditioner containing wetting and emulsifying agents; biodegradable, environmentally safe and certified High Traction by National Floor Safety Institute (NFSI).
    1. Acceptable Material: L & M Construction Chemicals, Inc., FGS Concrete Conditioner.
  - E. Finish: High Gloss, 1800 grit
  - F. Specifier Note: L & M Chemicals' Vivid Dye is currently available in 24 standard colors. L & M

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Vivid Dye colors can be combined to create an unlimited number of color variations. For color selection, refer to the L & M Chemicals' Vivid Dye color chart that can be found on their website, [www.LMCC.com](http://www.LMCC.com).

G. Color: To be approved with mock up

9. Requirements:

A. Hardened Concrete Properties:

1. Minimum Concrete Compressive Strength: 3500 psi (24 MPa).
2. Normal Weight Concrete: No lightweight aggregate.
3. Non-air entrained.

B. Placement Properties:

1. Natural concrete slump of 4 1/2 inches - 5 inches (114 - 127 mm). Admixtures may be used.
2. Flatness Requirements:
  - a. Overall FF 50.
  - b. Local FF 25.

C. Hard-Steel Troweled (3 passes) Concrete: No burn marks. Finish to ACI 302.1R, Class 5 floor.

D. Concrete Flat Company must be American Concrete Institute (ACI) Certified.

10. Verify Concrete Slab Performance Requirements: If new concrete

- A. Verify concrete is cured to 28 day, 3500 psi (24 MPa) strength.
- B. Verify concrete surfaces received a hard steel-trowel finish (3 passes) during placement.
- C. FF of 50 should be obtained.

11. Apply FGS Hardener Plus, Hardener, Densifier As Follows:

- A. First coat at 250 ft<sup>2</sup>/gal (6.25 m<sup>2</sup>/L)
- B. Second coat at 350 ft<sup>2</sup>/gal (8.75 m<sup>2</sup>/L)
- C. Hardener