

POLISHED CONCRETE - LOCATIONS: Classrooms, cafeterias, halls

This section is written to reflect the strict requirements of L & M Construction Chemicals, Inc. PSD will accept another installer/material if the exact same specifications can be met (i.e.: 1800 polish, penetrating stain, etc). Materials and/or installer may be approved equal to be determined before documents go to bid by design TEAM and PSD.

1. **Rilem** Test Method 11.4 Standard Measurement of Reduction of Moisture Penetration through
2. Horizontal Concrete Surfaces.
3. **INSTALLER**
 - A. Not less than 3 years experience
 - 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
 - E. floor scrubbers – as needed to properly do the work.
 - F. . 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
4. **Mock-Up:**
 - A. Mock-Up Size: [100 ft² (9.3 m²) 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.
5. **Performance**
 - A. Abrasion Resistance: ASTM C779, Method A, high resistance, no more than 0.008 inch (0.20 mm) wear in 30 minutes.
 - B. B. Reflectivity: Increase of 35% as determined by standard gloss meter.
 - C. C. Waterproof Properties: Rilem Test Method 11.4, 70% or greater reduction in absorption.
 - D. D. High Traction Rating: NFSI 101-A, non-slip properties.
6. **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. Fort Lift Tires need to be covered in order not to have sheet rock nails in tires which will scar concrete slab. 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 installer/material if the exact same 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. 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. Acceptable Material: L & M Construction Chemicals, Inc., Joint Tight 7 50.
- C. Concrete Dyes: Fast-drying dye packaged in premeasured units ready for mixing with VOC exempt solvent; formulated for application to polished cementitious surfaces. 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). 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 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.
- G. Color: To be approved with mockup Requirements:
 - A. Hardened Concrete Properties: Minimum Concrete Compressive Strength: 3500 psi (24 MPa).
- H. Normal Weight Concrete: No lightweight aggregate.
- I. Non-air entrained.
- J. Placement Properties:
- K. Natural concrete slump of 4 1/2 inches - 5 inches (114 - 127 mm). Admixtures may be used.
9. 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 ft²/gal (6.25 m²/L)
 - B. Second coat at 350 ft²/gal (8.75 m²/L)
 - C. Hardener: 14851 Calhoun Rd., Omaha, NE 68152-1140; Telephone: (800) 362-3331, (402) 453-
12. 6600; Fax: (402) 453-0244; website: www.LMCC.com, www.fgs-permashine.com; Email: info@lmcc.com. OR approved equal to be determined before documents go to bid by design TEAM and PSD.