



## **PM DBS Decorative Seamless Flooring GUIDE SPECIFICATION**

### **DIVISION 09 67 26 - QUARTZ FLOORING**

#### **1. GENERAL**

##### **1.1 SUMMARY**

This specification covers the installation of a durable, decorative, seamless floor system consisting of a clear, water-white, moisture-tolerant epoxy and various quartz aggregates. Designed to be extremely versatile, the DBS finish can be engineered to provide a very aggressive, slip resistant finish, a glass-smooth finish, or anywhere in between as specified. The formulation exhibits very good chemical resistance as well as excellent impact and abrasion resistance, making DBS an excellent choice for a variety of commercial, institutional, and industrial applications.

##### **1.2 WORK INCLUDED**

Furnish all labor and materials to prepare surface and install system in accordance with the following specifications.

##### **1.3 RELATED DOCUMENTS**

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections apply to this Section.

##### **1.4 DELIVERY, STORAGE, AND HANDLING**

The materials shall be delivered to the job site in the original factory sealed containers bearing the product name, color, manufacturer's lot number, and precautionary labels. All products shall be manufactured or supplied by Milamar Coatings, L.L.C., Oklahoma City, OK. Materials are to be stored in a dry, enclosed area, protected from exposure to moisture and direct sunlight, and maintained at a temperature between 50°F and 80°F.

##### **1.5 INSTALLER QUALIFICATIONS**

Contractor shall be an established firm, regularly engaged in satisfactory installation of polymeric flooring materials, and able to provide a list of three (3) projects of similar nature and complexity completed in the last 5 years. Contractor shall provide a letter of certification by manufacturer indicating that Contractor is currently qualified to install this polymeric system.

## 1.6 PROJECT CONDITIONS

- (a) Concrete substrate shall have cured thirty (30) days prior to application. If curing compounds have been used, they must be mechanically removed. Concrete shall be level to 1/8" in 10', have a steel troweled finish, and be free of grease and laitance. Surface must be free of holes, voids, or defects.
- (b) Concrete subfloors on or below grade shall be adequately waterproofed beneath and at the perimeter of the slab. Under normal operating conditions, with HVAC on, substrate interior relative humidity must be below 75% and calcium chloride test results (per ASTM F-1869) must not exceed 5.0 pounds per 1,000 square feet per 24 hours.
- (c) General Contractor shall supply utilities including electric, water, and finished lighting. An air and substrate temperature of between 60°F and 85°F, and a relative humidity of 50% or less shall be maintained during installation and curing. In some cases, low temperature curing agents can be specified for temperatures between 40°F and 60°F.
- (d) Job area shall be free of other trades during installation and curing.

## 1.7 SUBMITTALS

The installer shall submit a finished sample of the product, color, and texture specified, along with complete product data, and Material Safety Data Sheets. All performance properties and cautions contained therein shall be considered part of this specification. Prior to commencing the installation, the Contractor shall install with Owner's approval, a mutually agreed upon sample indicative of the final color and texture of the system. This test area shall serve as the job standard for the installation.

## 1.8 COMPLIANCE

All components of the quartz flooring system shall be compliant with the National, Federal and State Architectural Industrial Maintenance (AIM) regulations for allowable maximum volatile organic compound (VOC) limit.

## 1.9 WARRANTY

Contractor shall furnish a written warranty for a period of one full year from the date of installation.

## 2. PRODUCTS

### 2.1 ACCEPTABLE MANUFACTURERS / PRODUCTS

Milamar's **PM DBS** and **PM PTF** as manufactured by PolyMax Division of Milamar Coatings, LLC, Oklahoma City, OK. 800-459-7659.

Wide range of colors are available.

### 2.2 DESCRIPTION / PROPERTIES

Milamar **PM PTF** shall be installed at recommended thickness for proper sloping and leveling as needed to prepare the floor for Milamar **PM DBS** system.

Milamar **PM DBS** shall be installed at 1/8" thickness consisting of (see Section 3 for details):

- (a) three (3) applications of 100% solids water clear epoxy binder
- (b) two (2) applications of multi-colored ceramic coated quartz aggregates, broadcast into the binder
- (c) optional finish coat of PM-500 sealer (see section 3 for details)

### MINIMUM ACCEPTABLE SYSTEM PERFORMANCE CHARACTERISTICS

Compressive Strength (ASTM C-579) @ 7 days	11,250 psi.
Tensile Strength (ASTM D-638)	6,846 psi.
Flexural Strength (ASTM C-580)	4,350 psi.
Bond Strength (ACI 503)	350 psi. Concrete fails
Linear Shrinkage (ASTM C-883)	nil
Hardness (ASTM D-2240)	83 Shore D
Water Absorption (ASTM C-413)	0.009%
Flammability (MIL D-3134F)	Fire Retardant
Elongation (ASTM D-638)	4%

The flooring system shall show no chemical attack or discoloration when tested in accordance with ASTM D-1308 at 72°F for 7 days at the indicated concentrations against the following reagents:

- Ammonium Hydroxide 28%
- Clorox
- Ethylene Glycol
- Gasoline
- Isopropyl Alcohol 98%
- Mineral Spirits
- Skydrol # 500
- Sodium Hydroxide 30%

### 2.3 PACKAGING

All materials shall be factory weighed and packaged from a single source manufacturer.

### 2.4 SUBSTITUTIONS

No substitutions shall be allowed.

## 3. EXECUTION

### 3.1 EXAMINATION

With installer present, the substrate shall be examined for compliance with requirements for installation tolerances and other conditions affecting performance. (Reference Section 1.6) Proceed with installation only after unsatisfactory conditions including levelness tolerances have been corrected.

### 3.2 PREPARATION

- (a) **CONCRETE** - The concrete shall be prepared by mechanical means such as shot blasting or scarification with an integral dust collection system. Any spalled or deteriorated concrete shall be removed and filled back to the original surface with filler as recommended by manufacturer. All sloping and leveling shall be done with Milamar PM-PTF system in compliance with manufacturer's instructions.
- (b) **JOINTS** - All non-moving cracks and control joints shall be routed out to 1/4" minimum in width and depth and filled with Milamar's PM 180 joint filler in compliance with manufacturer's instructions. All moving cracks and joints shall be marked,

then filled with a firm but non rigid sealant material designed to handle the anticipated movement. After the floor cures, sawcuts shall be made over marked joints, and filled with sealant.

- (c) **MASKING** - All termination points, gratings, drains and other surfaces requiring protection shall be masked.

### **3.3 INSTALLATION**

- (a) **WATERPROOFING (OPTIONAL)** - Should waterproofing the substrate be desirable, areas shall be treated with PM 180 waterproofing membrane, applied at a minimum of 25 mils DFT in compliance with manufacturer's directions.
- (b) **COVE BASE (OPTIONAL)** - Where specified, cove base shall be installed prior to installing floor system, in 2", 4", or 6" height with a nominal 1/2" radius between floor and wall surfaces. Unless otherwise noted on drawings, all cove base tops shall terminate with a manufacturer approved cove base strip.
- (c) **FIRST BASECOAT** - Basecoat shall be 100% clear epoxy. Components shall be pre-mixed, blended, squeegee applied, then lightly back-rolled with a good quality medium nap roller according to manufacturer's directions. Application rate shall be 10 mils DFT, or 160 square feet per mixed gallon. Roughness or porosity of substrate may affect coverage rate.
- (d) **FIRST BROADCAST** - Ceramic coated quartz in color selected shall be broadcast to excess while the basecoat is still wet. Application rate shall be 400 pounds per 1,000 square feet. Allow to cure before proceeding.
- (e) **SECOND BASECOAT** - Excess broadcast shall be swept off. 100% solids clear epoxy shall be applied in the same manner as the first basecoat. Reduced coverages will be likely due to a rougher surface. Application rate shall be 75 - 100 square feet per gallon.
- (f) **SECOND BROADCAST** - Ceramic coated quartz shall be broadcast to excess while the basecoat is still wet. Application rate shall be 400 pounds per 1,000 square feet. Allow to cure before proceeding.
- (g) **SEAL COAT** - Excess broadcast shall be swept off. Seal coat shall be 100% solids clear epoxy, applied in the same manner as basecoats. Application rate shall be 75 - 100 square feet per gallon. Seal coat shall be repeated till texture approved by owner/architect has been achieved.
- (h) **FINAL COAT (OPTIONAL)** - Should additional resistance to chemical attack and / or UV lighting be necessary, aliphatic clear urethane sealer shall be applied at 4 mils DFT per manufacturer's instructions.
- (i) **CLEAN-UP** - Waste materials, rubbish, and debris shall be removed from site and disposed of in accordance with local regulations. Work area shall be left in clean condition.

### **3.5 PROTECTION**

The General Contractor shall be responsible for protection of the finished floor from damage by subsequent trades.

- (a) Work area shall be protected from water, airborne particles, and other contaminants until products are cured and tack free, approximately 24 hours after completion at 70°F.
- (b) System shall be protected from immersion and special chemical exposure for a minimum of 7 days at 70°F.

**END OF SECTION**  
1007PMDBS

For additional information, visit our web site:

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