



PM 5000 AC GUIDE SPECIFICATION

1. GENERAL

1.1 SUMMARY

This specification covers the installation of chemically resistant, UV-resistant floor coating system formulated for use in aircraft hangars where impact and abrasion resistance are required and exposure to Skydrol®, jet fuel, and brake fluids are commonplace. Also ideal for automotive repair shops and many other industrial applications, PM 5000 AC's light-reflective finish can substantially reduce lighting and maintenance costs.

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.
- (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 flooring system shall be compliant with local state architectural coatings volatile organic compound (VOC) rule and national EPA VOC requirements.

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

PM 5000 AC as manufactured by Milamar Coatings, L.L.C., Oklahoma City, OK. 800-459-7659.
Wide range of colors are available.

2.2 DESCRIPTION / PROPERTIES

PM 5000 AC shall be installed at 21 – 24 mils consisting of (see Section 3 for details):

- (a) an application of a clear 100% solids epoxy primer coat at 8 mils DFT
- (b) an application of a high solids epoxy pigmented body coat at 8 mils DFT
- (c) an application of a chemically-resistant aliphatic urethane finish at 5 mils DFT

MINIMUM ACCEPTABLE SYSTEM PERFORMANCE CHARACTERISTICS FOR EXPOSED FINISH

Tensile Strength (ASTM D-638)	5,300 psi.
Flexural Strength (ASTM C-580)	5,351 psi.
Bond Strength (ACI 503)	350 psi. concrete fails
Linear Shrinkage (ASTM C-883)	nil
Hardness (ASTM D-2240)	84 Shore D
Water Absorption (ASTM C-413)	0.009%
Flammability (MIL D-3134F)	Fire retardant
Indentation (MIL D-3134F)	nil
Elongation, topcoat (ASTM D-638)	18%

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:

- Acetic Acid 20%
- Ammonium Hydroxide 20%
- Clorox
- Ethylene Glycol
- Gasoline
- Jet Fuel, JP4, JP5, JP8
- Mineral Spirits
- Nitric Acid 40%
- Skydrol # 5000
- Sulphuric Acid 45%
- Toluene

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 diamond grinding to achieve a minimum CSP#2 profile. Any spalled or deteriorated concrete shall be removed and filled back to the original surface with filler as recommended by manufacturer.
- (b) **JOINTS** - All non-moving cracks and control joints shall be routed out to 1/4" minimum in width and depth and filled with ICO Lastic 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, saw cuts 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 ICO Lastic waterproofing membrane, applied at a minimum of 25 mils DFT in compliance with manufacturer's directions.
- (b) **PRIMER** - Primer with clear 100% solids epoxy. On oil-contaminated surfaces, substitute Oil Tolerant Primer. 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 8 mils DFT, or 200 square feet per mixed gallon. Roughness or porosity of substrate may affect coverage rate. Allow to tack before proceeding to next step.
- (c) **BODY COAT** – Body coat shall be high solids pigmented 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 8 mils DFT, or 200 square feet per mixed gallon. Allow to dry before proceeding to next step.
- (d) **FINAL COAT** – Final coat shall be chemical resistant urethane sealer, applied at 8 mils WFT per manufacturer's instructions.
- (e) **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 the time that the subcontractor completes the work until substantial completion or acceptance by the owner.

For additional information, visit our web site:

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