

Airplane Hanger Specification

Part 1 - GENERAL

General Provisions

- A. Work to be covered by this section, under written specification or by drawing, shall comply with all provisions of the contract documents.

Work Included

- A. All work to be provided in this section shall include material, labor, and equipment necessary to furnish the complete installation of a polymer resinous coating system, as specified in documents for this project and/or the finish schedules contained in the drawings; including but not limited to the following:
1. Surface preparation
 2. Concrete repairs [as needed]
 3. Joint Sealing [if appropriate]
 4. Application of the appropriate epoxy base coat
 5. Installation of the polymer mid coat
 6. Application of the clear urethane finish coat

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Related Sections

A. Concrete

1. Concrete shall be allowed to cure for (the minimum period required for the product specified) or for a minimum of 28 days.
2. Concrete Slab-on-grade or Below-grade construction shall be installed over an effective moisture vapor barrier beneath the finished slab. (Refer to Part 2 - Supplemental this specification.)
3. Placed concrete should be moisture cured. No curing compounds or similar surface contaminants, which would impede the adhesion of the polymer coating system to the substrate, shall be used for curing the placed concrete.
4. Concrete surfaces shall be sloped to drains according to requirements of the particular project or meet ACI 301 guidelines for placing and finishing concrete; and noted accordingly in drawings and/or specifications for this project.

Submittals

Submit the following in accordance with the conditions listed in the Specification for this project - in Division 1, and in compliance with the project documents as outlined.

- A. Submit current manufacturer's technical data and literature for the polymer resinous coating system(s) specified in this section.
- B. Submit product color charts and available textured finishes for selection by Architect and/or Owner, from the manufacturer's standard selection series.
- C. Submit a letter from the manufacturer certifying that the polymer resinous coating system complies with this specification.

Quality Assurance

- A. **Materials:** The base coat shall be a 100% solids pigmented epoxy. The mid coat shall be pigmented and either a 100% solids epoxy OR an 81% solids polyaspartic depending upon the desired UV resistance. The protective top coat shall be a clear urethane that is VOC compliant. The same manufacturer will furnish all materials used for this installation in order to ensure optimum adhesion to the substrate and compatibility of materials. This shall include primers (if required), base coat, aggregates, and finish coats to complete the installation.
- B. **Installer:** Enlist a contractor experienced in the installation of polymer resinous coating and approved by the manufacturer; and who can perform within the scope of work required to complete the contract for this section of the project.

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Delivery, Storage and Handling

- A. Deliver materials in original unopened packages and containers clearly labeled with the manufacturer's name and applicable warnings, and shall be stored in a dry location at a minimum temperature of 12.8^o C (55^o F).

Warranty

- A. A joint warranty will be provided for a period of one (1) year from the date of completion of the work; manufacturer shall provide a warranty for material provided on this project and the installer will provide a warranty for workmanship.

Part 2 - PRODUCTS

Manufacturer

- A. The resinous epoxy flooring system shall be a three-coat system comprised of the following:
 - Base Coat: DecoColor Product 746 Pigmented - applied at 130 sq. ft. per gallon.
 - Base Coat: DecoFinish P81 Product 1062 Pigmented - applied at 120 sq. ft. per gallon.
OR Resurfacer Plus 3.0 Product 705 Pigmented - applied at 130 sq. ft. per gallon
 - Topcoat: ArmorFinish E81 Product 1061 Clear (No Odor Urethane) - applied at 300 sq. ft. per gallon.

Division 9

As manufactured by:

Thermal-Chem Corporation
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Product Characteristics

- A. Colors: As selected from the manufacturer's color chart, or as otherwise determined, selected, and approved by the Architect and/or Owner.
- B. Physical Properties: The epoxy resinous base coat shall meet the minimum properties indicated by the following list of technical data when tested by the methods indicated:

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|---|--------|---|
| a.) Compressive Strength: ASTM D695 | 7 days | >7,800 psi |
| b.) Bond Strength (ACI 503) | >350 | 100% conc. Failure |
| c.) Shore 'D' Hardness (ASTM D-2240) | | >80 |
| d.) Tabor Abrasion (ASTM D-1044)
CS 17 wheel | | loss / 1,000 cycles
= 38 - 42 mg. loss |
| e.) Tensile Elongation (ASTM D-638) | | 5.8% +/- 1 |

Refer to Product Description Sheet for Physical Properties depending upon Mid Coat selection

Physical Properties of the Top Coat:

- | | | |
|---------------------------------|-------------|------------------------------|
| a.) Solids | | 81% |
| b.) Grams per liter | | 188 |
| c.) Abrasion Resistance | | 18-20 mg. loss |
| d.) Wet Film Thickness | | 5.3 mils
300 sq. ft./gal. |
| e.) Coefficient of Friction Dry | ASTM C 1028 | .9 |

Supplemental

- A. Where the potential for moisture vapor transmission is high, and an adequate barrier beneath the slab is 'suspect' or has NOT been installed, a vapor barrier coating system should be applied prior to installation of the polymer resinous flooring system.

- B. The texture of the finished epoxy floor surface shall be chosen and approved in writing by the Architect, Owner and/or his Agent prior to commencement of work; from the manufacturer's selection series or by samples submitted by the contractor.

Part 3 - EXECUTION

Examination and Inspection

- A. Verification Of Conditions:
 - 1. Inspect all surfaces that will receive the polymer resinous coating system.
 - 2. Before commencing work, Architect, Owner, and/or his Agent shall be notified of any detrimental or unsatisfactory conditions that exist which could delay the completion of this project, interfere with the execution of the contract or be the cause for a defective or faulty installation.
 - 3. Work shall not proceed until all conditions have been satisfied, and application of any material shall signify that the surfaces have been inspected and are satisfactory for this installation.

Surface Preparation

- A. Surface Conditions: The existing surface must be clean and free of any contaminates, laitances or any deleterious foreign substances that would or could impede the proper adhesion of the polymer resinous coating system to the substrate.
- B. Concrete Substrate: Prepare the surface by means of mechanical abrasion such as shotblasting or other methods as approved by the manufacturer, to obtain sufficient adhesion to the substrate and in accordance with the manufacturer's specifications.
- C. Once surface prep has been completed, the following determinations should be made:
 - 1. Ambient and surface temperatures.
 - 2. Moisture vapor content.
 - 3. pH value of surface.

Installation

- A. Installation of each component of the polymer resinous coating system shall be applied according to manufacturers instructions to produce a smooth and monolithic surface in the mil thickness indicated by the drawings and/or specifications.
- B. Base Coat: The base coat shall be applied according to the manufacturer's instructions and spread rates.

- C. Mid Coat: Apply polymer resinous coating or polyaspartic system at wet/dry mil thickness indicated by an appropriate method of application as directed by the manufacturer's installation guide and/or instruction.
- D. Finish Coat Application: After Mid Coat application has cured sufficiently, the top coat(s) can be applied in accordance with manufacturer's instructions and as may be necessary to achieve the desired and selected texture.
 - 1. Texture, finish and color shall be uniform, consistent and conform to the selection and approval(s) made in writing by the Architect, the Owner and/or his Agent for this project.
 - 2. Dry mil thickness of finished coating system shall be uniform, and will provide a homogeneous texture, smooth finish and consistent color.

Protection of Finished System

- A. Installation and work areas must be kept clean and free of traffic and other trades during application procedures, and for 24 hours minimum after the finish coat has been applied, to allow for adequate/initial cure. Appropriate care must be taken by the installer to avoid and prevent contamination of the flooring system during the various stages of application.

Manufacturer

Any questions or comments regarding the contents of this *Installation Guide*, for technical questions or assistance, and/or questions with regard to specific installation procedures, contact the manufacturer:

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