

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes:
 - a. Metallic resin concrete floor coating system.

1.2 SUBMITTALS

- A. Product Technical Data: Submit manufacturer's technical data for each product specified.
- B. Material Certificates: Submit manufacturer's safety data sheets for each product specified.
- C. Maintenance Instructions: Submit manufacturer's maintenance instructions.
- D. Samples: Submit physical samples representative of the final finish for owner's or general contractor's written approval before proceeding with installation.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: A properly licensed and insured contractor that has demonstrated the proven skills and commercial experience required to install the specified flooring system.
- B. Manufacturer Qualifications:
 - a. Designated manufacturer:
Ultra Durable Technologies
355 6th Ave N
Waite Park, MN 56387
(320) 258-2266
info@ultradt.com
 - b. No request for substitution may be considered that would change the generic type of system specified. Acquire primary resin flooring components such as primers, resins, hardeners, fillers, and topcoats from designated manufacturer or authorized distributor. Use ancillary materials like patching compounds, sealants, and repair materials recommended by the designated manufacturer.
- C. Pre-Installation Meeting: Organize a meeting at the project site before starting work or mock-ups. Require attendance of parties directly affecting work of this section. Review surface preparation, priming, application, curing, protection, and coordination with other work.
- D. Mock-Ups: Execute mock-ups to confirm choices made from sample submissions and to illustrate the aesthetic outcomes and establish benchmarks for material quality and workmanship. Preserve the mock-up area uncovered.
 - a. Conduct full-thickness mock-ups on a 16 square foot area designated by the Architect.
 - b. Demonstrate the finishes to confirm product color, texture, and gloss.
 - c. Replicate final lighting conditions for the Architect's assessment of mock-ups.
 - d. If approved, mock-ups may be incorporated into the final work provided they remain unaltered at the time of substantial completion.
 - e. The mock-up should exhibit the required slip resistance and receive written approval from the owner's representative.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Delivery

- a. Transport materials in their original packaging and containers with intact seals, with labels clearly identifying product name, manufacturer, and batch or lot number.
- b. Material should be delivered to job site and checked for completeness and shipping damage prior to job start.
- B. Storage
 - a. Store materials in accordance with manufacturer's written instructions.
 - b. Keep containers sealed until ready for use. Material should be stored in a dry, enclosed area protected from the elements.
 - c. Do not subject material to excessive heat or freezing.
 - d. Shelf life: Established based on manufacturer's written recommendation for each material being used.
- C. Handling
 - a. Protect materials during handling and application to prevent damage or contamination.
- D. Condition materials for use according to manufacturer's written instructions prior to application.
- E. Record material lot number and quantity delivered to jobsite/storage.

1.5 PROJECT CONDITIONS

- A. Environmental Constraints: Adhere to the resin flooring manufacturer's guidelines on substrate temperature, ambient conditions, moisture, ventilation, and other factors influencing the application of resin flooring.
- B. Ensure adequate ventilation and airflow.
- C. Illumination: Ensure permanent lighting or mimic permanent lighting conditions during the application of resin flooring.
- D. Close work areas with suitable barriers and post legible signs at points of entry to prevent traffic and trades from entering during application and cure period.
- E. Protect finished floor from damage by subsequent trades.

1.6 WARRANTY

- A. Manufacturer's Warranty: Provide manufacturer's standard limited warranty per published warranty terms, current as of date of substantial completion.
- B. Warranty Period: One (1) year from date of substantial completion, or as otherwise specified in manufacturer's then-current warranty document.
- C. Refer to manufacturer's full warranty terms and conditions at <https://ultradt.com/warranty/> for exclusions, claims procedures, and limitations of liability.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Approved Manufacturers:
 - Ultra Durable Technologies
 - 355 6th Ave N
 - Waite Park, MN 56387
 - (320) 258-2266
 - info@ultradt.com

2.2 SYSTEM

- A. UDT Metallic System – refer to manufacturer's documentation for alternative product options.

- a. Primer (optional): MC Epoxy pigmented with UltraColor of similar color to selected UDT Metallic at 535 square feet per gallon.
- b. Base Coat: MC Epoxy pigmented with UltraColor of similar color to selected UDT Metallic at 250 square feet per gallon.
- c. Metallic Coat: MC-UV Epoxy with selected UDT Metallic at 80 square feet per gallon.

2.3 MATERIALS

- A. Primer (optional): MC Epoxy is a two-part high-solids epoxy resin. UltraColor is a pigment additive.
- B. Base Coat: MC Epoxy is a two-part high-solids epoxy resin. UltraColor is a pigment additive.
- C. Metallic Coat: MC-UV Epoxy is a two-part high-solids epoxy resin. UDT Metallic is a pigment additive.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Inspection: Examine all areas where work will be performed. Log and report any conditions that may negatively affect the work. Do not begin surface preparation or application until any unacceptable conditions have been remedied.
- B. Surface Prep: Concrete must be shot-blasted or diamond grinded to achieve a minimum Concrete Surface Profile (CSP) of 2 to 3. Eliminate all contaminants, loosely adhering particles, efflorescence, oils, curing agents, paint, dust, and debris using approved mechanical methods. If the surface's condition is doubtful, conduct a test patch.
- C. Ensure concrete is dry and that moisture vapor emission rates fall within manufacturer-specified limits.
 - a. Moisture Evaluation: Execute one or both of the following tests.
 - i. Anhydrous Calcium Chloride Test: Conduct according to ASTM F1869, proceeding only if moisture emission rates do not exceed 3 lbs./1000 sq. ft./24 hours, with testing frequency adjusted based on area size.
 - ii. In-Situ Probe Test: Perform relative humidity measurements using in-situ probes according to ASTM F2170, proceeding only if humidity levels are at or below 75%.

3.2 ENVIRONMENTAL CONDITIONS

- A. All personnel must adhere to essential safety measures. Follow all installation guidelines provided by manufacturers meticulously.
- B. Rectify any damaged or deteriorated concrete as per the resin flooring manufacturer's instructions.
- C. Resinous Material Preparation: Blend components and prepare materials following the resin flooring manufacturer's instructions.
- D. Utilize patching and filling materials to rectify holes and uneven areas as per manufacturer's guidance.
- E. Address control joints and static cracks to prevent them from appearing through the finished flooring as per manufacturer's instructions.

3.3 APPLICATION

- A. Apply the resinous flooring over a suitably prepared concrete surface strictly following manufacturer's specifications.
 - a. Apply to a clean and prepared concrete surface.
 - b. Keep the surface temperature between 60°F and 80°F for at least 24 hours before applying the floor topping, or as recommended by the manufacturer.
- B. Implement the resinous flooring system components as instructed by the manufacturer to achieve a consistent, monolithic surface of the specified thickness.

- a. Ensure optimal adhesion between the substrate and the flooring system, as well as between individual coats.
- b. Allow resinous flooring to cure according to the manufacturer's guidelines before opening the space to the public.
- c. For expansion and isolation joints in the substrate, follow the resin flooring manufacturer's instructions.

3.4 COMPLETED WORK

- A. Cleanup: Remove surplus materials, tools, equipment, and waste upon completion. Clean off splatters, drippings, and stains.
- B. Protection: Guard the finished work following the manufacturer's recommendations, using temporary covers as advised by the resin flooring manufacturer until fully cured, ensuring no traffic until the manufacturer confirms the coating's cure.

END OF SECTION