Specification Document
Product: SpecPoxy Binder

DIVISION 9 – FINISHES
Section 09600 – Floor Finishes

Part 1 – General

1.01 Summary

A. This specification details the application of a waterproof, slip-resistant surface using SpecPoxy Binder, a low-modulus epoxy binder, with selected aggregate for floors, bridges, and parking decks.

1.02 Delivery, Storage, and Handling

A. Delivery: Products must arrive in original, sealed containers with labels intact.

B. Storage: Keep off the ground, protected from extremes of weather.

C. Conditioning: Condition products as recommended by SpecChem.

1.03 Job Conditions

A. Environmental Conditions: Apply only when temperatures are above 40°F and rising. B. Protection: Shield nearby surfaces to prevent damage from spills and application processes.

1.04 Submittals

A. Documentation: Provide SpecPoxy Binder product data and safety data sheets.

Part 2 – Products

2.01 Manufacturer

A. SpecPoxy Binder produced by SpecChem, Kansas City, MO, meets the specifications.

2.02 Materials

A. Epoxy resin binder: Two-component system, low viscosity, moisture tolerant, meeting ASTM C881 Type III Grade 1 Class B & C.

2.03 Performance Criteria

A. **Compressive Strength (ASTM D695):**

- 7 days: 7,500 psi

B. **Bond Strength (ASTM C882):**

- 14 days: 2,750 psi

C. **Elongation at Break (ASTM D638):**

- 10%

D. **Water Absorption (ASTM D570):**

- Less than 0.5%

E. **Gel Time (ASTM C881):**

- 45 minutes

F. **Tack-Free Time at 70°F:**

- 3.5 hours

Part 3 – Execution

3.01 Surface Preparation

A. Cleaning the Surface: Ensure surfaces are clean, dry, and free from oil, grease, dirt, laitance, curing compounds, and any other foreign materials. Achieve optimal adhesion by creating a roughened, open profile on the surface, similar to sandpaper. Shotblasting or mechanical abrasion is recommended. Vacuum thoroughly to remove dust and debris.

3.02 Mixing and Application

A. Mixing SpecPoxy Binder: Do not thin with solvents. Ensure air, material, and surface temperatures are at least 40°F before mixing. Precondition materials to 75°F for easier mixing. Mix 1 part of Part A with 1 part of Part B using a low-speed drill and Jiffy mixer for three minutes. Only mix what you can use within the product's pot life.

B. Epoxy Mortar Preparation: Gradually add 3.5 to 5 parts of clean, dry silica sand to 1 part of mixed SpecPoxy Binder, ensuring the sand is fully wetted out by the epoxy. For overlays and patching, apply a neat coat of SpecPoxy Binder as a primer to the prepared substrate, then trowel or screed the epoxy mortar while the primer is tacky.

C. Broadcast Overlays: Apply neat SpecPoxy Binder with a 3/16” notched squeegee at approximately 75-100 sq ft per gallon. Broadcast clean, dry aggregate (20-40 gradation silica sand recommended) after the binder has leveled out, at a rate of 2 pounds per square foot or until rejection. Remove excess aggregate after curing and apply a second coat or seal coat if required.

D. Curing and Coverage: SpecPoxy Binder will reach initial cure in 24 hours and final cure in 7 days, achieving a compressive strength of 7,500 psi and a bond strength of 2,750 psi after 14 days. The product is available in 1 gallon, 2 gallon, and 10-gallon units.

3.03 Cleaning

A. Clean tools and spills with suitable solvent while SpecPoxy Binder is uncured. Cured material can only be removed mechanically.

B. Ensure the workspace is clean, with no residual spillage affecting adjacent areas.