



Specification Document

Product: Duo Patch

DIVISION 3 - CONCRETE

Section 03550 - Concrete Toppings

Section 03720 - Concrete Resurfacing

Section 03730 - Concrete Rehabilitation

Part 1 - General

1.01 Summary

A. This specification covers the patching or overlay of interior and/or exterior horizontal, vertical, and overhead surfaces with Duo Patch, a polymer-modified cement mortar/concrete.

1.02 Quality Assurance

A. Manufacturer qualifications: SpecChem must have an ongoing quality assurance program, independently audited regularly.

B. Comply with all safety and weather conditions as recommended by SpecChem and local, state, and federal regulations.

1.03 Delivery, Storage, and Handling

A. Deliver materials in original, unopened containers with labels intact.

B. Store materials off the ground, protected from the elements.

C. Follow manufacturer's recommendations for product conditioning.

1.04 Job Conditions

A. Environmental Conditions: Apply only when the temperature is above 45°F and rising.

B. Protect adjacent areas to prevent damage during application.



1.05 Submittals

A. Provide SpecChem Technical Data Sheets (TDS) and Safety Data Sheets (SDS).

Part 2 – Products

2.01 Manufacturer

A. Duo Patch as produced by SpecChem.

2.02 Materials

A. Polymer-modified Portland cement mortar: Duo Patch consists of a liquid polymer emulsion (Component A) and a specially formulated cementitious mix (Component B).

B. When extended for deeper repairs, use clean, well-graded, saturated surface dry aggregate.

2.03 Performance Criteria

A. Typical Properties of Mixed Product:

- Working Time: Up to 30 minutes
- Finishing Time: 60 minutes
- Color: Natural concrete gray

B. Typical Properties of Cured Product:

- Compressive Strength (ASTM C109 Modified):
 - 1 day: 2500 psi
 - 7 days: 4000 psi
 - 28 days: 6000 psi
- Flexural Strength (ASTM C348):
 - 28 days: 1300 psi
- Bond Strength (ASTM C882 Modified):
 - 28 days: 1800 psi



Part 3 – Execution

3.01 Surface Preparation

- A. Ensure Cleanliness: The concrete must be clean and free from oil, grease, dust, laitance, or any surface contaminants. Mechanically abrade the surface to a minimum Concrete Surface Profile (CSP) of 3 as per ICRI 310.2 standards.
- B. Create Notched Edges: For enhanced durability in heavy load or high traffic applications, saw cut a ¼” recess around the perimeter of the patch, forming a thickened edge.
- C. Moisture Condition: The concrete surface must be saturated-surface-dry (SSD) with no standing water present.
- D. Steel Reinforcement Cleaning: Remove rust from all exposed steel reinforcing and apply SpecPrep SB as a protective coating.
- E. Priming: Apply SpecPrep SB to SSD concrete via spray or brush, ensuring the repair mortar is applied wet on wet or within the open time specified in the SpecPrep SB datasheet. Alternatively, use a scrub coat of mixed repair mortar, ensuring it is placed before the bond coat dries.

3.02 Mixing and Application

- A. Measure 7.0 to 7.5 pints of Duo Patch Admix per 50-pound bag, adjusting based on desired consistency.
- B. Use a low-speed drill for mixing. Begin with the Admix, then gradually add the Duo Patch powder, mixing for 2-3 minutes until homogeneous. Do not mix more material than can be used within the product's setting time.
- C. For repairs up to 1” thick, apply Duo Patch directly. Do not exceed 7 pints of Admix for depths over 1/2”.
- D. For larger repairs over 1”, extend Duo Patch with up to 60% by weight (30 lbs) of clean, SSD 3/8” aggregate, mixing for an additional 2 minutes. This mix should be placed within 15-20 minutes.



3.03 Placement Procedure

A. Apply Duo Patch into the prepared area with a trowel, screed, or pour, ensuring full contact and integration with the surface. For a level finish, screed Duo Patch flush with the surrounding concrete.

3.04 Finishing/Curing

A. After initial set, when Duo Patch is firm, finish with a hand trowel to match the surrounding concrete texture. Use SpecChem IntraFilm as a finishing aid if needed. Under most conditions, Duo Patch is self-curing. In extreme conditions, apply an ASTM C309 compliant SpecChem water-based curing compound.

3.05 Cleaning

A. Clean tools and equipment with water before Duo Patch hardens to prevent material wastage and ensure longevity of application tools.