



**Specification Document
Product: SpecPatch 30**

Section 03 01 00 – Maintenance of Concrete

Part 1 – General

1.01 Summary

This section includes the procedures for the repair and rehabilitation of horizontal, vertical, and overhead concrete surfaces using SpecChem SpecPatch 30, a polymer-modified, cementitious repair mortar.

1.02 System Description

SpecPatch 30 is designed for the rapid repair of interior and exterior concrete and masonry surfaces. It provides a durable and long-lasting repair solution suitable for a wide range of applications.

1.03 Related Sections

- Structural Concrete – Section 03 33 00
- Maintenance of Cast-in-Place Concrete – Section 03 01 30

1.04 Quality Assurance

- A. Manufacturer qualifications: SpecChem must have an ongoing quality assurance program, independently audited regularly.
- B. Contractor qualifications: Must have successful experience in concrete construction.
- C. Comply with all safety and environmental conditions as recommended by SpecChem and local, state, and federal regulations. Refer to Safety Data Sheets (SDS) for safety and handling practices.



1.05 Delivery, Storage, and Handling

A. Materials should be delivered in original, unopened containers labeled with the manufacturer's name, product identification, and batch numbers. Damaged materials must be removed from the site immediately.

B. Store materials off the ground and protect from rain, freezing, or excessive heat until ready for use.

C. Condition the product as recommended by the manufacturer.

1.06 Job Conditions

A. Environmental Conditions:

- Do not apply the material if it is raining, snowing, or if such conditions are imminent. The minimum application temperature is 45°F (7°C) and rising.

B. Protection:

- Precautions should be taken to prevent damage to adjacent surfaces during mixing and handling.

Part 2 – Products

2.01 Manufacturer

SpecPatch 30, as manufactured by SpecChem, meets the requirements of this specification.

2.02 Materials

A. SpecPatch 30 is a single-component, fast-setting, polymer-modified repair mortar suitable for a variety of applications.

B. The mortar is designed for high build applications and rapid setting properties.

2.03 Performance Criteria

Typical properties of the mixed polymer-modified, portland cement mortar:



- **Yield:** 0.43 ft³ per bag
- **Color:** Concrete gray
- **Mixing Ratio:** 6.75 to 7.25 pints (3.2 to 3.4 L) of water per 50 lb (22.7 kg) bag
- **Application Thickness:** Minimum 1/8" (3 mm), Maximum 1" (25 mm) per lift
- **Application Temperature:** > 45°F (7°C)
- **Working Time:** ~30 minutes
- **Compressive Strength (ASTM C109):**
 - 3 hours: 1,000 psi (6.9 MPa)
 - 1 day: 3,000 psi (20.7 MPa)
 - 7 days: 5,000 psi (34.5 MPa)
 - 28 days: 6,000 psi (41.4 MPa)
- **Flexural Strength (ASTM C348):**
 - 28 days: 650 psi (4.5 MPa)
- **Bond Strength (ASTM C882):**
 - 7 days: 1,680 psi (11.6 MPa)
- **Length Change (ASTM C157):**
 - Wet Cure @ 28 days: +0.03%
 - Air Cure @ 28 days: -0.08%
- **Freeze-Thaw Resistance (ASTM C672):**
 - Scaling Resistance 25 cycles: 0% loss
- **Set Time at 70°F (ASTM C266):**
 - Initial Set: 30-40 min
 - Final Set: 60 min

Part 3 – Execution

3.01 Surface Preparation

A. Cleaning the Surface:



- Ensure the concrete is sound, and free from oil, grease, dust, laitance, or other contaminants. Saw cut the perimeter of the repair area 1/8" deeper than the repair depth to create a notched, reinforced edge.

B. Abrasive Preparation:

- Mechanically abrade the surface to a minimum Concrete Surface Profile (CSP) of 5, in line with ICRI 310.2 guidelines. All concrete surfaces must be saturated-surface-damp (SSD) with no standing water present.

C. Steel Reinforcement Treatment:

- Clean all exposed steel reinforcement of rust and coat with SpecPrep SB. Apply a spray or brush coat of SpecPrep SB to SSD concrete, proceeding with the repair mortar application wet on wet or within the recommended open time as per the SpecPrep SB datasheet.

3.02 Mixing and Application

A. Mixing Procedure:

- Mix 6.75 to 7.25 pints of clean water per 50 lb bag of SpecPatch 30, adjusting for desired consistency. Use a low-speed drill for mixing, starting with water then gradually adding the SpecPatch 30. Mix for 2 to 3 minutes until homogenous.

B. Application Instructions:

- For placement, trowel SpecPatch 30 firmly into the prepared area ensuring full contact with the bonding surface. Overfill slightly and shape roughly during placement.

C. Shaping:

- After the initial set when SpecPatch 30 is surface hard, shave the material to the final shape using a steel trowel. The maximum depth of neat repair mortar is 1" per lift; additional lifts can be applied after the initial set ensuring the original lift has a rough surface to enhance bond between lifts. For large or deep applications over 3/4", extend SpecPatch 30 with clean 3/8" SSD pea stone up to 50% by weight (25 lbs) and mix for an additional 2 minutes.



3.03 Finishing and Curing

A. Finishing:

- Finish the repair material to match the surrounding concrete texture. SpecPatch 30 is self-curing under most conditions but in severe drying conditions, an ASTM C309 compliant water-based SpecChem curing compound should be used.

B. Curing:

- Moist curing is recommended immediately after finishing and should continue for 48 hours. Protect newly applied material from rain, sun, and wind until compressive strength is 70% of the 28-day strength. Cover with insulating material to prevent freezing. Setting time is dependent on temperature and humidity.

3.04 Cleaning

A. Uncured material can be cleaned from tools with water. Cured cement mortar can only be removed mechanically.

B. Leave the finished work and work area in a neat, clean condition without evidence of spillovers onto adjacent areas.