

# SURFIX™ BLEND PATCH

POLYMER-MODIFIED, RAPID-SETTING, HORIZONTAL, VERTICAL AND OVERHEAD REPAIR MORTAR

## DESCRIPTION

SURFIX™ BLEND PATCH performs as a fast-setting, cement-based, one-component, polymer-modified, concrete and masonry patching material ideally suited for horizontal, vertical and overhead repair applications.

## APPLICATIONS

Used for filling honeycombs and spalls

On above or below grade, vertical and overhead cementitious substrates

Perfect for patching precast products, concrete pipe, curbs, sidewalks, bridges and wall panels

Can be used to correct substrate irregularities of forms or unconsolidated concrete

## ADVANTAGES

Use for both interior and exterior applications

Can be applied overhead and vertically without the use of forming aides

Apply to 1/4-2" (6-51 mm)

Fast-set mortar that can be troweled, shaped and shaved after initial set

One-component, only add water

Bonds tenaciously to cement-based substrates

Set time is approximately 30 minutes

## SHELF LIFE / STORAGE

12 months from the date of manufacture, when unopened bags are properly stored in a cool, dry place, unexposed to moisture and sunlight.

## PACKAGING

50-lb (22.7-kg) bags.

## TECHNICAL DATA

### Compressive strength (ASTM C109):

3 hours	3,000 psi (20.7 MPa)
1 day	4,000 psi (27.6 MPa)
7 days	5,000 psi (34.5 MPa)
28 days	5,500 psi (37.9 MPa)

### Approximate coverage:

0.48 cu ft (0.01 m<sup>3</sup>) or approximately 23 sq ft at 1/4" thickness (2.1 m<sup>2</sup> at 6 mm).

### Color:

Gray

### Application temperature range:

40°-95°F (4°-35°C)

**NOTE:** Above 85°F (29°C), use ACI Hot-Weather Application Guidelines.

### Set (ASTM C191; 70°F (21°C), 50% RH):

Initial set	10 to 15 minutes
Final set	20 to 30 minutes

### Freeze/Thaw resistance (ASTM C666) Method "B":

After 300 cycles 1% loss due to slight scaling; no spalling

### Average scaling resistance (ASTM C672-98):

Number of cycles	25
Rating	0
Condition of surface	No scaling visible

### Shear bond strength (ASTM C882):

1 day	1,035 (7.1 MPa)
7 days	1,650 psi (11.4 MPa)

### Flexural strength (ASTM C348):

1 day	1,142 psi (7.9 MPa)
28 days	1,180 psi (8.1 MPa)

**NOTE:** Cooler temperatures, inadequate ventilation and higher humidity can extend drying times. All data derives from tests under laboratory conditions; field conditions may yield slightly different results.

## DIRECTIONS FOR USE

### Surface preparation:

SURFIX™ BLEND PATCH should be stored at 40°F (4°C) to 80°F (27°C) 24 hours prior to installation. Surface must be clean, hard, and free from dirt, loose particles, waxes, plastics, curing compounds, grease, paint, efflorescence, and any foreign materials that will inhibit a tenacious bond. Adjoining surfaces must be sound, clean, and free of loose or damaged concrete, dust, dirt and other contaminants that will interfere with the bond. If applicable, completely expose and clean all reinforcing steel, ensuring a minimum clearance of 3/4" (19 mm) behind reinforcing steel. Perform in accordance with ICRI Technical Guidelines No. 03730.

For best results, repair area edges should be saw cut to a depth of 1/4" (6 mm). Mechanically prepare all surfaces to a minimum CSP (Concrete Surface Profile) 3 to 4, as per ICRI Guideline No. 310.2-1997. Ensure all contaminants are removed from the surface.

# SURFIX™ BLEND PATCH

Apply a scrub coat application of loosely mixed SURFIX™ BLEND PATCH slurry. This should be applied to all surfaces coming into contact with the patching material. Do not allow scrub coat to dry prior to the placement of the SURFIX™ BLEND PATCH. If scrub coat is dry, completely remove to a clean surface and reapply.

Refer to ICRI Guideline No. 310.2R-2013 "Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings and Polymer Overlays and Concrete Repair." Never use acid, chemical cleaners or mastic removers on any surface to which a Penetron Specialty product will be applied.

## Mixing:

SURFIX™ BLEND PATCH requires 4-5 qt (3.8-4.7 l) of clean water per 50 lb (22.7 kg) of powder. Mix only the amount of material that can be placed in 10 minutes. Pour the required amount of potable water into a clean mixing container, then add the measured amount of SURFIX™ BLEND PATCH while continuing to mix and blend thoroughly for 1-2 minutes to a lump free, putty- like consistency. Small amounts of material can be mixed using a trowel or a 1/2" drill (400-600 rpm) and paddle. For thinner applications of 1/4" (6 mm), mix 4-5 qt (3.8-4.7 l) of a 50/50 blend of ACRYLIC BONDCRETE and water. Do not overwater or re-temper mix.

## Installation:

Immediately apply the fresh mortar into the entire surface, forcing SURFIX™ BLEND PATCH firmly into the previously prepared area to ensure full contact with all bonding surfaces. Slightly overfill the area. After initial set, use a trowel to shave SURFIX™ BLEND PATCH to the desired final profile, shaving the patch from the center towards the bond edge at the existing surfaces. A wet spray may be used for final shaping.

In deeper areas, additional lifts can be made after the original patch has reached initial set. Score and roughen the original lift layer to improve bond between applications. SURFIX™ BLEND PATCH can be placed in lifts up to 2" (51 mm) on vertical and overhead applications by holding the mortar in place until initial set has occurred.

**NOTE:** The minimum ambient and surface temperatures should be 40°F (4°C) at time of application. Hot weather and conditions above 80°F (27°C) will reduce working time and accelerate set, while cold temperatures below 60°F (16°C) will have a retarding effect.

## Curing:

Cure in accordance with American Concrete Institute procedure number 308. Protect patch from high temperature, high wind, low humidity and direct sun causing rapid drying, by covering with wet burlap or plastic for up to 24 hours. A water-based curing compound can also be used. Do not apply to frozen or frost covered areas.

Contact Penetron Specialty Products Technical Support for additional information and/or view the installation videos, which can be found on our web site: [www.penetronsp.com](http://www.penetronsp.com)

## APPLICATION TOOLS

Mixing container, mixing paddle, heavy duty drill, and hand trowels.

## CLEAN UP

Clean all tools and equipment with water immediately after use, prior to material hardening.

## SPECIAL CONSIDERATIONS

- SURFIX™ BLEND PATCH dries to a light gray color. Variations in the final color can occur due to changes in temperature, humidity and other jobsite conditions. Penetron Specialty Products recommends installing a test area, ensuring suitability of SURFIX™ BLEND PATCH for its intended use.
- Substrate must have a minimum direct tensile bond test reading of 150 psi (1 MPa) per (ASTM C1583-04).

- This product is ready to use with the addition of water. DO NOT add any materials or additives to mixture other than those described above.
- Do not use in permanently submerged areas, such as swimming pools, fountains, etc.

## JOB MOCKUPS

Penetron Specialty Products recommends that, when our products are used in any application or as part of any system that includes other manufacturers' products, the installer and/or design professional shall test all the system components collectively for compatibility, performance and long-term intended use in accordance with pertinent and accepted industry standards prior to any installation. Written documentation of the tests performed shall be satisfactory to the design professional and installer. Test results must include the means and methods of application, products used, project specific conditions being addressed, and standardized tests performed for each proposed system or variation.

## SAFE HANDLING INFORMATION

Before using this product, review the SURFIX™ BLEND PATCH Safety Data Sheet (SDS), which can be found on our website: [www.penetronsp.com](http://www.penetronsp.com). Avoid contact with eyes and wear suitable protective eye wear. Avoid prolonged or repeated contact with skin. Wear gloves and suitable protective clothing. Do not breathe dust. In case of insufficient ventilation, wear respiratory equipment. For additional information regarding first aid and emergency procedures, refer to the product Safety Data Sheet (SDS).

## Waste disposal:

This product, when discarded or disposed of, is not listed as a hazardous waste in federal regulations. Dispose in a landfill in accordance with local regulations.

KEEP OUT OF REACH OF CHILDREN

**WARRANTY:** PENETRON SPECIALTY PRODUCTS INC. warrants that the products manufactured by it shall be free from material defects and will conform to formulation standards and contain all components in their proper proportion. Should any of the products be proven defective, the liability to PENETRON SPECIALTY PRODUCTS INC. shall be limited to replacement of the material proven to be defective and PENETRON SPECIALTY PRODUCTS INC. shall in no case be liable otherwise or for incidental or consequential damages. **PENETRON SPECIALTY PRODUCTS INC. MAKES NO WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED.** User shall determine the suitability of the product for its intended use and assume all risks and liability in connection therewith.

This Product Data Sheet has been prepared in good faith on the basis of information available at the time of publication. It is intended to provide users with information about and guidelines for the proper use and application of Penetron Specialty Products under normal environmental and working conditions. Because each project is different, PENETRON SPECIALTY PRODUCTS INC. cannot be responsible for the consequences of variations in such conditions, or for unforeseen conditions.

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