

RENEW[®] CR

HIGH-PERFORMANCE, POLYMER-MODIFIED, CEMENT-BASED CONCRETE RESURFACER

DESCRIPTION

RENEW[®] CR is a high-performance, polymer-modified, cement-based concrete resurfacer that makes old concrete surfaces new again. It corrects both interior and exterior horizontal and vertical surfaces that are worn, spalled, damaged or distressed. Available in gray and white, RENEW[®] CR is stainable and can be integrally colored, offering many unique options for both old and new concrete.

APPLICATIONS

Patios
Balconies
Sidewalks/walkways
Concrete stairs
Parking decks
Driveways
Garage floors
Pool decks
Decorative toppings

ADVANTAGES

Exceptional bonding properties to old concrete
Freeze/thaw resistant
Cost effective alternative to concrete replacement
Installs from a tapered edge to 1/2" (13 mm) thick
Fast drying for a quick turnaround
Walkable in 2 hours; rubber tire traffic in 8 hours
Mix only with water, self-curing
Excellent coverage and easy to use
Can be integrally colored or stained
Install on 5 to 7-day-old new concrete
Environmentally friendly. May be LEED eligible; visit www.penetronsp.com for LEED contributions document

TECHNICAL DATA

Compressive strength (ASTM C109), air cured:

1 day	2400 psi (16.6 MPa)
7 days	3600 psi (24.8 MPa)
28 days	5000 psi (34.5 MPa)

Flexural strength (ASTM C348):

28 days	1000 psi (6.9 MPa)
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Tensile strength (ASTM C190):

28 days	>570 psi (4.0 MPa)
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Flammability (ASTM E84):

Flame spread	-0-
Fuel contribution	-0-
Smoke development	-0-

Approximate coverage (Yield) per 50-lb (22.7-kg) bag:

1/16" (2 mm)	100 ft ² (9.3 m ²)
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Installed weight:

1/16" (2 mm)	0.52 lb/ft ² (2.5 kg/m ²)
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Application temperature range:

50-95°F (10-35°C)

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

Set (ASTM C191; 70°F (21°C), 50% RH):

Working time	45 minutes
Initial set	60 minutes
Final set	90 minutes

Color:

Light gray or white

Mixing water (per 50-lb (22.7-kg) bag):

Use 4.0 to a maximum 5.5 quarts (3.8 to 5.2 l) of water.

Cure time @ 73°F (23°C):

Accepts foot traffic in 2 hours, light rubber tire traffic in 8 hours and full service in 24 hours.

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

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

BEFORE



AFTER



DIRECTIONS FOR USE

Surface preparation:

Surfaces must be clean, sound, dry, minimum 50°F (10°C) and free of oil, gypsum compounds, wax, grease, sealers, coatings, curing compounds, urethane, paint, asphalt, dirt, loose surface material or any contaminant that will act as a bond breaker. Prepare the surface by mechanical means, such as chipping, shot-blasting, grinding, scarifying or high-pressure water washing. Never use acid or mastic removers on any surface to which a Penetron Specialty Products flooring product will be applied. Reference the International Concrete Repair Institute (ICRI) Concrete Surface Profile (CSP) standards of #2 to #3 for acceptable profile height. The area should be Saturated Surface Dry (SSD), with no standing water, prior to application. Honor all existing expansion joints, control joints and moving cracks. Failure to do so could result in delamination or cracking of the RENEW® CR.

Crack repair:

RENEW® CR is a veneer application for use over existing concrete. Any cracks in the concrete, particularly those that move even when repaired, may mirror through the thin layer of RENEW® CR. Crack repairs should be allowed to cure and set completely prior to covering.

Joints and moving cracks: Under no circumstances should RENEW® CR be installed over any joints or any moving cracks. All existing expansion joints, isolation joints, construction joints and control joints (saw-cuts), as well as any moving cracks, must be honored up through the topping by installing a

flexible sealing compound specifically designed for use in moving joints. Failure to do so may result in cracking and/or disbonding of the topping. Penetron Specialty Products cannot be responsible for problems that arise from joints, existing cracks or new cracks that may develop after the system has been installed.

Dormant cracks: Before proceeding with the installation, it is recommended that all dormant cracks (non-moving) be prefilled with a fully rigid, high-modulus, 100% solids epoxy. Please note that the epoxy must be sand broadcast to refusal while still fresh and allowed to cure fully prior to removing all excess sand.

Mixing:

For each 50 lb (22.7 kg) bag of RENEW® CR add 4 qt (3.8 l) to a maximum 5.5 qt (5.2 l) of clean potable water into a mixing pail. (Use the lower amount of water for a stiffer mix that can be troweled into place and the higher amount for applying with a squeegee). Then add RENEW® CR, while mixing at full speed with a mixing paddle attached to a heavy duty 1/2" drill (minimum 650 rpm). Mix for 2 minutes or until lump free. Adding NO additional water. Do not re-temper.

Installation:

RENEW® CR should only be applied to a properly prepared substrate. Remove any material that may interfere with the bond, including dust and dirt, by sweeping and vacuuming. Expansion joints should be cleaned, marked and protected to prevent being filled by RENEW® CR. Pour the mixed RENEW® CR onto the Saturated Surface Dry (SSD) substrate. Then

RENEW® CR

spread with a squeegee or flat trowel, using enough pressure, to assure good contact with the entire surface. Depending on the desired appearance, finish with either a broom or trowel. Work in areas small enough for easy access of finishing without having to walk on the fresh RENEW® CR. A broom finish needs to be applied within 10-15 minutes of application, while the product is still fresh. Pour subsequent applications, while the previous application is still wet. On vertical installations, such as stairs, trowel RENEW® CR directly onto the properly prepared distressed area and finish as desired. It is recommended to apply 2 thin coats, 1/16" (2 mm) each, rather than 1 thick coat. RENEW® CR can be applied using a hopper gun with compressed air to create a knock-down type finish, desirable for pool decks.

NOTE: When installing over existing concrete substrates, RENEW® CR may not match the surrounding distressed concrete. If applicable, a test application is recommended to determine color suitability.

Curing & sealing:

RENEW® CR is self-curing. Do not use damp curing methods or curing and sealing compounds. Ambient and substrate temperature should be a minimum of 50°F (10°C) during application and for the first 24 hours. To avoid staining, the fully cured RENEW® CR should be sealed using a water-based, breathable concrete sealer.

Contact Penetron Specialty Products Technical Support for additional information and/or view the installation videos, which can be found on the Penetron Specialty Products website: www.penetronsp.com.

APPLICATION TOOLS

Mixing pail, mixing paddle, 1/2" heavy duty drill (minimum 650 rpm), trowels, hopper gun with compressed air (if needed), finishing broom, squeegee and masonry brush.

CLEAN UP

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

SPECIAL CONSIDERATIONS

- RENEW® CR (Gray) 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 RENEW® CR for intended use
- Substrate must have a minimum direct tensile bond test reading of 150 psi (1 MPa), per ASTM C1583-04
- DO NOT re-temper
- 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

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 RENEW® CR Safety Data Sheet (SDS) that can be found on the Penetron Specialty Products website: www.penetronsp.com. Avoid contact with eyes and wear suitable protective eyewear. 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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