

RPS-207

Slurry Seal

SIMPSON

Strong-Tie

CSI Specification: 07 11 16 Cementitious Damp-proofing; 9 96 43 Fire Retardant Coatings

DESCRIPTION

RPS-207 Slurry Seal is a two-component, polymer-modified cementitious coating designed for fire insulation with FRP materials as well as waterproofing and damp-proofing concrete and masonry substrates. This product is part of the tested assembly in UL Design No. N861, which achieved a four-hour fire rating when subjected to ASTM E119/UL 263 full-scale fire testing. Please refer to UL Online Certifications Directory for the UL listing.

ASSESSMENT

WHERE TO USE

- Coating over FRP materials for fire insulation and flame/smoke spread resistance
- Horizontal and vertical surfaces
- Above-grade and below-grade applications
- Waterproofing and damp-proofing concrete and masonry
- Interior and exterior applications
- To protect concrete and masonry from freeze/thaw cycles

FEATURES

- Trowel or slurry consistency
- Convenient pre-measured kit
- Excellent bond strength
- Can be applied by brush, roller, spray, or trowel
- UL listed (www.ul.com/database)

CODES

ICC-ES ESR-3403



PRODUCT DATA

All testing performed at 73°F (23°C) and 50% R.H.

Generic Description

Polymer-modified cementitious mortar

Packaging

3.9 US gallon (15 L) kit (RPS-207KT1-1) contains:

- 1 US gallon (3.8 L) jug of Component "A" (RPS-207-1A)
- 50 lb. (22.7 kg) bag of Component "B" (RPS-207-50B)

Color

Gray

Mixing Ratio

Pre-proportioned kit. Use entire contents of all components.

Application Rate

FRP and Damp-proofing: 40 WFT mils total applied in one coat, 40 ft.²/US gal. (1 m²/L), depending on surface profile and porosity

Waterproofing: 80 WFT mils total applied in two coats, 40 ft.²/US gal. (1 m²/L) per coat depending on surface profile and porosity

Pot Life

30 minutes

Working Time

4.5 hours

Re-coat Window

4–48 hours

Full Cure

7 days

Storage

Store dry between 40° and 95°F (4°–35°C). Protect liquid component from freezing.

Shelf Life

1 year in unopened packaging

VOC

3 g/L (mixed)

Yield

0.50 ft.³ (0.014 m³) per kit

TECHNICAL INFORMATION

All testing performed at 73°F (23°C) and 50% R.H.

Set Time

ASTM C807

Initial Set	7 hours
Final Set	9 hours

Unit Weight

ASTM C185

110 pcf 1,762 kg/m³

Compressive Strength

ASTM C109

3 days	1,800 psi	12.4 MPa
7 days	2,230 psi	15.4 MPa
28 days	3,000 psi	20.7 MPa

Tensile Strength

ASTM C190

7 days 470 psi 3.2 MPa

Splitting Tensile Strength

ASTM C496

28 days 530 psi 3.6 MPa

Flexural Strength

ASTM C348

28 days 740 psi 5.1 MPa

Absorption

ASTM C67

28 days	
48-hour soak	1.65%
5-hour boil	3.70%

Bond Strength

ACI 503R, modified

28 days 335 psi 2.45 MPa

Bond Strength to CSS Carbon Composite

ASTM D4541

7 days 285 psi 1.97 MPa



For use in Beam/Slab External Reinforcing System
SPRAY-APPLIED FIRE RESISTIVE MATERIAL FIRE
RESISTANCE CLASSIFICATION
SEE UL FIRE RESISTANCE DIRECTORY R37897

LIMITATIONS

- Do not apply to surfaces below 45°F (7°C) or if temperatures are expected to fall below minimum temperature for 24 hours following application.
- Do not apply to surfaces above 90°F (32°C).
- Protect liquid component from freezing; discard if freezing occurs.
- Protect coating from rain and freezing temperatures for 24 hours following installation.
- Adhesion and product compatibility testing must be performed prior to over-coating existing coatings.
- Do not apply less than 20 WFT mils per coat (80 ft.²/US gal. [2 m²/L]).
- Service conditions for horizontal applications should be limited to foot traffic.
- Allow a minimum of 24 hours at 75°F (24°C) air-curing before exposing installed RPS-207 to submerged conditions. Lower temperatures will extend required air-curing time.
- Not a decorative coating. Color or shade can vary due to jobsite conditions.
- Avoid contact with aluminum surfaces.

SURFACE PREPARATION

Concrete and CMU

Surfaces must be sound, clean, and free of all contaminants that could impair product adhesion, bond, or performance. Concrete and CMU should be a minimum of 28 days old or substantially cured to the equivalent design strength prior to RPS-207 installation. Prepare concrete by high-pressure water-jetting or other mechanical means to achieve an open pore structure and surface profile per SSPC-SP13/NACE No. 6 or ICRI Guideline 310.2 CSP 2-3. Remove all cleaning media and debris by vacuum or blowing with high-pressure oil-free air. Saturate the surface with potable water to achieve a saturated surface dry (SSD) surface condition. The substrate should have no standing water remaining at the time of application.

Fiber-Reinforced Polymer (FRP)

FRP precured laminate system — Allow CSS-EP to cure for a minimum of 24 hours at 72°F (22°C). Lightly sand FRP by hand with a medium-grit sandpaper (100 grit). Care must be given not to damage the laminate fibers. Do not mechanically abrade. Remove any remaining dust or contaminants with a non-residue-forming solvent; wipe using clean cloths. Allow the solvent to dry prior to application of RPS-207.

FRP fabric systems saturated with CSS-ES — Allow FRP system to cure for a minimum of 24 hours between 72° and 90°F (22°–32°C). RPS-207 may be applied any time after FRP has cured for 24 hours. **RPS-207 may be applied without sanding within a 24- to 72-hour window after FRP installation.** If system has cured for more than 72 hours before RPS-207 is applied, FRP surface must first be sanded using the same procedure as used for precured laminate system. FRP surface must be clean and dust free prior to application of RPS-207.

MIXING

Always mix full units. For best results, condition to 70°F (21°C). Gently shake Component “A”, then add 90% to a clean pail or mortar mixer. Begin mixing with a low-speed (300–600 rpm) drill and mixing paddle or mortar mixer and slowly add entire contents of Component “B”. Avoid clumping. Adjust consistency with remaining Component “A”. Scrape the sides and bottom and continue mixing for 2–3 minutes or until a uniform consistency is achieved.

APPLICATION

Remove all standing water by vacuum or blowing with oil-free, compressed air prior to installation. For concrete and CMU applications, RPS-207 must be installed on damp or SSD surfaces. Do not install through standing water or on dry porous surfaces. Fill all surface imperfections with RPS-263 Rapid-Hardening Vertical/Overhead Repair Mortar. RPS-207 Slurry Seal can be applied by brush or trowel, or spray-applied with a hopper gun or textured sprayer (e.g., Graco GTX-2000). When applied as a trowelable mortar, use a ½ in. (0.3 cm) notched trowel for the first coat and a flat trowel for subsequent coats.

Fiber-Reinforced Polymer (FRP): Apply one coat at a rate of 40 ft.²/US gal. (1 m²/L). Finish with a damp sponge if desired.

Damp-Proofing: Apply one coat at a rate of 40 ft.²/US gal. (1 m²/L). Finish with a damp sponge, if desired.

Waterproofing: Apply the first coat at a rate of 40 ft.²/US gal. (1 m²/L). Allow to dry for a minimum of 4 hours at 70°F (21°C). Apply second coat within the 24-hour re-coat window at a rate of 40 ft.²/US gal. (1 m²/L). Finish with a damp sponge, if desired.

Curing: For best results in high temperatures or windy conditions, wet cure with burlap and polyethylene immediately following finishing to protect against rapid drying and/or cracking.

If re-coat window has been exceeded, surface must be prepared according to original surface preparation guidelines for concrete. Do not apply in direct sunlight and avoid windy conditions. Coverage rates are approximate and provided for theoretical purposes only. Application method and surface condition may affect coverage rates and number of coats required to achieve minimum system thickness.

CAUTION

Component “A”: May cause eye and skin irritation. May cause an allergic skin reaction.

Component “B”: May cause serious eye and skin irritation or damage. Causes severe skin burns and eye damage. May cause an allergic skin reaction and respiratory irritation. When combined with water, may cause moderate to severe alkali burns. Contains silica; do not breathe dust.

Protective Measures: The use of safety glasses and chemical-resistant gloves is recommended. Use appropriate clothing to minimize skin contact. The use of a NIOSH-approved respirator is required to protect respiratory tract when ventilation is not adequate to limit exposure below the permissible exposure limit (PEL). Refer to Safety Data Sheets (SDS) available at strongtie.com/sds for detailed information.

FIRST AID

Eye Contact: Immediately flush eyes with plenty of cool water for at least 15 minutes while holding the eyes open. If redness, burning, blurred vision, or swelling persists, seek medical advice.

Skin Contact: Remove product and wash affected area with soap and water. Remove contaminated clothing. Wash clothing with soap and water before reuse. If redness, burning, or swelling persists, seek medical advice.

Ingestion: DO NOT INDUCE VOMITING. Seek medical advice. Never administer anything by mouth to an unconscious person. Rinse mouth immediately. Only induce vomiting at the instruction of medical personnel. Consult a physician immediately.

Inhalation: Remove affected person to fresh air. If affected person continues to experience difficulty breathing, seek medical advice.

CLEAN-UP

SPILLS

Liquid or Mixed Material Spills: Construct a dike to prevent spreading. Soak up with absorbent material such as clay, sand or other non-reactive material. Place in leak-proof containers. Keep out of sewers, storm drains, surface waters and soils.

Powder Spills: Sweep or vacuum material and place in a suitable container. Keep out of sewers, storm drains, surface waters and soils.

Surface Clean: Remove any residue with hot soapy water. Cured material can be removed only by mechanical means.

Tools and Equipment: Clean with hot soapy water immediately after use. Cured material can be removed only by mechanical means.

Skin: Use a non-toxic, pumice-based soap, citrus-based hand cleaner, or waterless hand-cleaner towel. Never use solvents to remove product from skin.

Disposal: Dispose of container and unused contents in accordance with federal, state and local requirements. Containers may be recycled; consult local regulations for exceptions.

LIMITED WARRANTY

This product is covered by the Simpson Strong-Tie RPS Product One-Year Limited Warranty, which is available at strongtie.com/limited-warranties or by calling Simpson Strong-Tie at (800) 999-5099.

IMPORTANT INFORMATION

It is the responsibility of each purchaser and user of each product to determine the suitability of the product for its intended use. Prior to using any product, consult a qualified design professional for advice regarding the suitability and use of the product, including whether the capacity of any structural building element may be impacted by a repair. As jobsite conditions vary greatly, a small-scale test patch is required to verify product suitability prior to full-scale application. The installer must read, understand, and follow all written instructions, and warnings contained on the Limited Warranty, product label(s), Product Data Sheet(s), Safety Data Sheet(s), and the strongtie.com website prior to use. For industrial use only by qualified applicators. KEEP OUT OF REACH OF CHILDREN!

 **WARNING!** Cancer and reproductive harm — www.P65Warnings.ca.gov.