RPS-505

Water-Based Acrylic Coating

SIMPSON Strong-Tie

CSI Specification: 09 97 23 Concrete & Masonry Coatings

DESCRIPTION

RPS-505 Water-Based Acrylic Coating is a single-component, fast-drying, protective architectural coating for concrete, masonry and stucco.

ASSESSMENT

WHERE TO USE

- Commercial building façades
- Concrete and masonry substrates
- New and remedial applications
- Exterior applications
- Vertical and overhead surfaces
- Tilt-wall and precast panels
- Block and brick masonry
- Fiber-reinforced polymer (FRP) topcoat
- Retaining walls
- Various DOT applications

FEATURES

- Excellent color retention
- 100% acrylic resin
- Good hiding properties
- Breathable
- Water based
- Fast drying
- Can be applied by brush, roller or spray
- Easy to clean
- Bonds well to concrete, masonry and FRP substrates
- Repels rain
- Excellent UV resistance

PRODUCT DATA

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

Generic Description
Water-based acrylic coating

Packaging

Kit Size	Model No.
1 US Gallon (3.8 L)	RPS-505GR-1
5 US Gallon (18.9 L)	RPS-505GR-5

Color
Medium Gray

Finish
Gloss

Application Rate
2.5–5 DFT mils total applied in two coats

275–550 ft.^{2}/US gal. (6.7–13.5 m^2/L) per coat depending on surface profile and porosity

Minimum Recoat
6 hours at 75°F (24°C); 50% RH

Full Cure
3 days at 75°F (24°C); 50% RH

Storage
Store dry between 40–95°F (4–35°C). Protect from freezing. Discard if frozen.

Shelf Life
1 year in unopened packaging

Solids Content
43% by volume

VOC
86 g/L

TECHNICAL INFORMATION

The data herein is based on laboratory testing under controlled conditions. Variations may result from mixing methods and jobsite conditions. All testing performed to Medium Gray GR04 formula at 73°F (23°C), 50% R.H., unless noted otherwise.

Dry to touch
ASTM D1640
2 hours

Adhesion to Concrete
ASTM D7234
300 psi 2.0 MPa

Moisture Vapor Permeability
ASTM E96, 5 DFT mil
12 perms

Density
ASTM D1475
10.4 lb./USGal (1.25 g/ml)

Viscosity
ASTM D2556
2,000 cps

Flexibility
ASTM D522, 1" mandrel
No cracking or delamination

UV Exposure
ASTM G154, 7 days

Accelerated Weathering
Cycle 3 –
UVB-313 - 2,500 hours
No cracking /
no delamination

Adhesion to cured Simpson Strong-Tie CSS fabrics
ASTM D7234, 7 days, 12 mils WFT
> 200 psi 1.4 MPa

MADE IN USA with GLOBAL MATERIALS

PLANNING

LIMITATIONS

- Do not apply to surfaces below 40°F (4.4°C) or if temperatures are expected to fall below minimum temperature for 6 hours following application
- Do not apply to surfaces above 90°F (32°C)
- Protect from freezing; discard if freezing occurs
- For vertical and overhead applications only
- Not designed to bridge moving cracks
- Adhesion and product compatibility testing must be performed prior to over-coating existing coatings
- Protect coating from rain for 6 hours following installation
- Do not apply when relative humidity exceeds 90%

PREPARATION

SURFACE PREPARATION

All surfaces must be sound, clean, dry, and free of all contaminants that could impair product adhesion or performance. All cracks, spalls, and voids must be repaired prior to coating installation.

Concrete: Concrete should be a minimum of 28 days old and fully cured prior to coating application. Prepare surface by abrasive blasting, water blasting or other mechanical means per SSPC-SP13/NACE No. 6, ICRI Guideline 310.2R CSP 1-3.

CMU/Masonry: Mortar should be a minimum of 28 days old and fully cured, taking care to level protrusions prior to coating application. Prepare surface by abrasive blasting, water blasting or other means to achieve a clean and sound surface.

Fiber-Reinforced Polymer (FRP): FRP surfaces to receive coating must be lightly abraded by hand with a medium-grit sandpaper (100 grit) prior to application. Care must be given not to damage the fibers. Do not mechanically abrade. Once surface is sanded, remove any remaining dust or contaminants with a light solvent wipe using clean cloths. Allow the solvent to dry before application of coating.

MIXING

For optimal product performance, condition to 70°F (21°C) and stir thoroughly with a low-speed (300–600 rpm) drill and mixing paddle for 3 minutes, scraping unmixed material from sides and bottom of mixing container as needed, taking measures to prevent air entrapment.

EXECUTION

APPLICATION

All Surfaces: Fill all surface imperfections with RPS-207 Slurry Seal or RPS-263 Rapid-Hardening Vertical/Overhead Repair Mortar.

Application: RPS-505 Water-Based Acrylic Coating can be applied by brush, roller, or spray. Surface should be dry prior to application. Two coats are recommended to yield 2.5–5 mils DFT.

First Coat: Apply the first coat of RPS-505 Water-Based Coating at a rate of 275–550 ft.^{2}/US gal. (6.7–13.5 m^2/L). Allow to dry for 6 hours at 75°F (24°C) prior to application of second coat.

Second Coat: Apply the second coat at a rate of 275–550 ft.^{2}/US gal. (6.7–13.5 m^2/L) to achieve total of 2.5–5 mils DFT.

Do not apply RPS-505 Water-Based Acrylic Coating to wet surfaces. Do not apply in direct sunlight and avoid windy conditions. Surface temperature must be a minimum of 5°F (3°C) above dew point. Do not apply in conditions above 90% relative humidity. Condensation that forms on the wet coating surface can interfere with drying and cause discoloration. Coverage rates are approximate and provided for theoretical purposes only. Application method and surface condition may effect coverage rates and number of coats required to achieve minimum system thickness.

EQUIPMENT

Brush: Soft nylon or bristle

Roller: Synthetic, with ⅜ in. to ½ in. (9.5 to 13 mm) nap

Spray Equipment:

Fluid Pressure	Fluid Tip	Filter Mesh
3,000–3,500 psi (21–24 MPa)	0.017 in.–0.023 in. (432–584 microns)	30–60 (595–250 microns)

SAFETY

CAUTION

WARNING! May cause an allergic skin reaction. Suspected of causing cancer. May cause damage to organs (kidney) through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.

Protective Measures: The use of safety glasses and chemically 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 PEL. Refer to Safety Data Sheet (SDS) available at **strongtie.com/sds** for detailed information.

FIRST AID

Eye Contact: Hold open eyes under running water for 15 minutes. Seek medical advice.

Skin Contact: Wash skin with soap and water. Seek medical advice if irritation develops.

Inhalation: Remove affected person to fresh air. If necessary, use artificial respiration. Seek medical advice.

Ingestion: If product is swallowed, call physician or poison control center. DO NOT INDUCE VOMITING, or give diluents to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice.

CLEAN UP

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.

Surface Clean: Remove residue with hot soapy water.

Tools and Equipment: Clean with hot soapy water immediately after use.

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.