

Sample Specification

Section 02760 Paving Specialties
**StencilCoat Commercial
Asphalt and Concrete Surfacing System**

1.0 GENERAL

1.1 Summary

The "StencilCoat Commercial Asphalt Surfacing System" is a 100% acrylic waterborne coating system utilizing a pre-formed fiber-paper or plastic stencil to define a brick or stone pattern on an asphalt or concrete surface.

"StencilCoat" is a three component coating system consisting of,

1. StencilCoat (tint-base)
2. LiquidTint (colorant)
3. Primer/Sealer (acrylic primer and sealer)

"StencilCoat Coatings" can be applied to new as well as existing concrete and asphalt surfaces.

1.2 Related Sections

Section 1.0 General
Section 2.0 Materials and Performance
Section 3.0 Delivery Storage and Handling
Section 4.0 Surface Preparation
Section 5.0 Application
Section 6.0 Coating Thickness
Section 7.0 Applicator Training
Section 8.0 Samples and Mockups
Section 9.0 Field Quality Control

2.0 Materials and Performance

2.1 Composition, Handling and Performance Characteristics

This section covers the composition, handling and application characteristics for the StencilCoat Asphalt and Concrete Surfacing System. Coatings used with this surfacing system must meet the minimum characteristic and performance properties described in the following characteristics and performance specifications.

2.1.1 StencilCoat Commercial Asphalt and Concrete Coating (Tint Base)

Material Composition, Handling and Application Characteristics

Table:1

Characteristics	Requirement
Resin	waterborne latex
% Solids by weight	> 80%
% Solids by volume	> 65%
Weight per gallon	13.5 lbs/gal
% non-reactive fillers	< 40%
Volatile Organic Compounds	< 75 g/l or 1/4lb/gal
Boiling Range	147° - 477°F
Vapor Density	Heavier than air
Liquid Density	1.5 – 1.7 kg/l @ 20°C
Flashpoint ASTM D 3278	>201°F
Flashpoint ASTM D 3278	>201°F
Hazardous Ingredients	none
Viscosity @ 70°F (20°C)	100-110 kU
Mix Ratio (Coating : LiquidTint) gal/pints	5gal : 1pint
Dry mil thickness per coat	15 to 17 mils
Number of coats to achieve rec. thickness	3 coats

Performance Requirements

Table:2

Test	Requirement
Dry Time (to re-coat) @ 50°F (10°C).....	50 min
Dry Time (to re-coat) @ 90°F (32°C).....	30 min
85% Cure (to permit traffic) @ 50°F (10°C).....	6 to 8 hours
85% Cure (to permit traffic) @ 90°F (32°C).....	2 to 4 hours
ASTM 2486 Scrub Resistance (30 dry mils)..... Applied as per manufacturers specifications.....	5000 cycles to max loss of 50% coating thickness
Dry mil build thickness per coat	15 to 17 mils
Temp. limits for service (of cured material)	-35°F to 145°F

2.1.2 LiquidTint (StencilCoat coloring system)

The coloring system “LiquidTint” shall consist of no less than 95% pure inorganic iron oxide pigments in a waterbase liquid carrier. Pigment particle size (fineness) must pass 95% minus 325 mesh. LiquidTint must be alkali resistant, water insoluble, inert, light resistant, inorganic, and lime-proof.

2.1.3 Primer/Sealer (used as a base primer as well as a top sealer where anti-skid is not required)

Primer/Sealer shall be water based 100% acrylic waterborne

Material Composition, Handling and Application Characteristics

Table:5

Characteristics	Requirement
Resin	waterborne latex
% Solids by weight	> 30%
% Solids by volume	> 29%
Weight per gallon	8.5 lbs/gal
% non-reactive fillers	< 0%
Volatile Organic Compounds	< 45 g/l or 1/10lb/gal
Boiling Range	147° - 477°F
Vapor Density	Heavier than air
Flashpoint ASTM D 3278	>201°F
Flashpoint ASTM D 3278	>201°F
Hazardous Ingredients	none
Viscosity @ 70°F (20°C)	44> kU
Mix Ratio (Primer : Water)	1 primer : 1 water
Mix Ratio (Sealer : Water)	1 sealer : 2 water
Dry mil thickness per coat	1 to 2 mils
# of primer coats to achieve rec. thickness	1 coat
# of sealer coats to achieve rec. thickness	1 coat

Performance Requirements

Table:6

Test	Requirement
Dry Time (to re-coat) @ 50°F (10°C).....	50 min
Dry Time (to re-coat) @ 90°F (32°C).....	30 min
85% Cure (to permit traffic) @ 50°F (10°C).....	6 to 8 hours
85% Cure (to permit traffic) @ 90°F (32°C).....	2 to 4 hours
ASTM 2486 Scrub Resistance (3 wet mils).....	500 cycles
Dry mil build thickness per coat	1 to 2 mils
Temp. limits for service (of cured material)	-35°F to 145°F

2.1.4. Fiber-Paper and Plastic Stencils

Stencils shall be made of water-resistance fiberboard, plastic coated and a minimum of 22-mil thick. All stencils shall arrive on site in unopened packaging in new condition. Stencils shall be secured to the substrate with an adhesive back or by randomly placed removable putty. Pattern and grout-line width shall be approved by the owner prior to tender closing.

Plastic stencils shall be made of reusable 125-mil flexible plastic, allowing the stencil to follow any contour of the surface. Pattern and grout-line width shall be approved by the owner prior to tender closing.

2.1.5. QUIKRETE® Resurfacer

On asphalt surfaces a slurry consisting of QUIKRETE® Resurfacer and Primer/Sealer shall be used to prevent surface cracking of the asphalt. Mix up to 10 cups of Primer/Sealer concentrate (mixed 1part concentrate to 1part water) per bag of QUIKRETE® Resurfacer. Coverage of one mixed bag should not exceed 120 sq ft. This slurry is applied using a rubber squeegee.

3.0 Delivery, Storage and Handling

3.1 Packaging and Labeling

All StencilCoat Commercial surfacing products shall be packed in standard closed containers. Each container of separately packaged component shall be clearly and durably labeled to indicate the date of manufacture, manufacturer's batch number, quantity, color, component identification and designated name or formula specification number together with special instructions.

3.2 Delivery, Storage and Handling

StencilCoat Commercial surfacing products shall be delivered to the site in sealed containers that plainly show the designated name, batch number, color, date of manufacturer, and name of the manufacturer. Store the material on site in enclosures, out of direct sunlight in a warm, ventilated and dry area at room temperature; do not allow coating to freeze. Care shall be taken in handling of coating containers to prevent puncture, inappropriate opening or other action, which may lead to product contamination. No materials that are past the coating manufacturer's recommended shelf life shall be used without the approval of the coating manufacturer.

4.0 Surface Preparation

4.1 Cleaning

Broom using mechanical brooming device, or stiff bristle hand broom. Scrape and blow fine sand and debris off of surface. Pressure washing may be necessary to remove bonded debris. Use a non-solvent based degreaser to remove stains. Spray degreaser on stained area and let stand for 15 minutes. Using a stiff broom or brush, agitate the stained area to remove stain and rinse with water. Repeat this procedure on severe stains. Thoroughly rinse the area and let dry for 24 hours.

4.2 Repair Damaged Asphalt

Damaged and cracked asphalt shall be repaired by heating damaged area until the asphalt cement is in a liquid state (ensuring asphalt does not exceed 375° F), turning over and mixing in new fresh asphalt if necessary to ensure repair is level with adjacent area. Infrared type heating mechanisms are the recommended tool for this procedure.

4.3 Preparation of New Asphalt

New asphalt surfaces shall be allowed to cool after final compaction roll to less than 140° F before applying coating. Asphalt mix design shall specified by a qualified Pavement Engineer and shall be designed for the purpose of the application.

4.4 Concrete Crack Repair

Grind crack (chase crack) using a diamond crack chasing blade to minimum 1/2" in depth and 1/4" in width. Blow clean and fill crack with Sika-Flex™ concrete joint filler. Fill to within 1/8" of surface and apply sand on top of Sika-Flex™ to allow mechanical bond to coating. Remove excess sand once Sika-Flex™ has cured.

5.0 Application

5.1 Environmental Conditions

Surfaces should be dry for at least 24 hours prior to applying StencilCoat coatings. 50°F is the recommended minimum air and surface temperature. The temperature of the concrete or asphalt surface must be at least 5°F above the dew point temperature during and after applying coating. Coating application must be complete at least two hours before sunset to allow for proper cure.

5.2 Setting Stencils

Stencils shall be placed on asphalt surface, overlapped on grout-line repeats and stapled or taped to secure. Small beads of putty (poster putty) shall be used to fasten paper stencils to the substrate. Stencil patterns are to be centered providing similar brick sizes on the outer edges of the project. Hand tape grout-lines are to be taped using fiber banding tape.

5.3 Masking

Mask all adjacent areas using paint-grade masking tape. Use duct taped on concrete and asphalt surfaces. Building paper extended a minimum of 48 inches beyond the edge of coated area is required to prevent over-spray of coatings onto adjacent areas.

5.4 Spray Equipment

Spray texture gun (Marshalltown® Sharpshooter I™ Hopper Gun). Graco "TexSpray" and Benron "EZ-TEX DX" sprayers.

Spray gun settings and alternative spray equipment shall be approved by the coating manufacturer.

5.5 Mixing Base Coat

Contractor to follow latest mixing techniques provided by the manufacturer.

6.0 Coating Thickness

6.1 Standard Thickness. The applied thickness of the coating shall be determined according to the application as noted in table 5. The owner may specify a greater thickness if so desired.

Required Film Thickness

Table: 5

Application	Film Thickness
Prime Coat	5 wet mils (1 dry mil)
Base (grout color) coat	25 wet mils (20 dry mils)
First (top coat) coat	30 wet mils (25 dry mils)
Second (top coat) coat	30 wet mils (25 dry mils)
Seal Coat where applicable	5 wet mils (1 dry mil)

7.0 Applicator Training

- 7.1 The Applicator shall be approved by the manufacture for the application being applied. The Applicator shall have lead personnel on the project that have been trained by manufacturer within the past 12 months of starting the project. At least one of these trained personnel shall be on site at all times during the application.

8.0 Samples and Mockups

Samples shall be provided to the owner (or owners representative) for approval prior to tender closing.

Samples shall display the following:

1. Grout-line color
2. Brick or stone Pattern
3. Brick or stone color
4. Variations of the above if requested

Samples and mockups to be applied to and presented on 24" x 24" x 1/4" hardboard panels unless otherwise requested.

Approval of color and pattern to be provided in writing to the bidding contractor no less than 7 days prior to bid closing.

Approved samples and mockups to be held by owner for future onsite verification.

9.0 Field Quality Control

- 9.1 The contractor for work under this section shall maintain a quality control program specifically to verify compliance with this specification. A daily log shall be kept to record actions in the field.
- 9.2 This log shall include the following information;
1. Surface preparation start date and time
 2. Photos of surface prior to start of preparation
 3. Close up photos of crack repair (before and after)
 4. Ambient temperature start and end of each day
 5. Relative humidity start and end of each day
 6. Substrate surface temperature start and end of each day
 7. Photos of surface after application of each coat
 8. Photos of stencils set in place (prior to top coat)

Note:

On projects larger than 1,000 square feet, break project into areas of approximately 1,000 square feet for the purpose of photo taking and record keeping. Number these areas and record the respective numbers on scaled drawing.

- 9.3 Dry film thickness shall be confirmed by the owner (or owners representative) on site during the application process.

Method:

2" x 4" lengths of duct-tape (or 2" x 4" thin plastic, glass or metal plates) shall be secured to the substrate that will receive coating. The tape will be randomly placed averaging one tape per 300 sq ft. These tapes shall be pre-marked (on the adhesive side) with location matching a marked, scaled drawing. The tape shall be removed within 1 hour after the final coat has been applied. These samples shall be kept by the owner (or owners representative) for future verification of dry film thickness (if verification becomes necessary).