

## **SAMPLE SPECIFICATION**

Section 02760 Paving Specialties

### **STREETCOAT Epoxy Modified Resin, Traffic Coating System**

IDEAL FOR VEHICULAR TRAFFIC, BIKE LANES AND COATING STAMPED ASPHALT SURFACES

#### **1.0 GENERAL**

##### **1.1 Summary**

STREETCOAT "Epoxy Modified Resin, Traffic Coating" is a high quality water-borne acrylic finish incorporating an epoxy additive to increase the abrasion resistance properties of the film.

STREETCOAT can be applied to new as well as existing concrete and asphalt surfaces.

##### **1.2 Advantages**

- Twin package, water-based system for ease of application and clean-up.
- Bonds tenaciously to concrete, masonry and asphalt surfaces.
- Resists ultraviolet degradation for long-term protection and color stability.
- Provides durable, non-skid texture on interior or exterior surfaces.
- Resists wear and abrasion through the incorporation of an epoxy additive.
- Protects against asphalt degradation by sealing in the vital oils of the asphalt mix.
- Helps prevent dusting and spalling of concrete surfaces.
- Surfaces resist penetration from general soils, motor oils and gasoline for ease in cleaning.
- No toxic fumes or objectionable odor. Meets all VOC requirements.

##### **1.3 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 STREETCOAT 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 STREETCOAT Asphalt and Concrete Coating (Tint Base)**

Material Composition, Handling and Application Characteristics

**Table:1**

<b>Characteristics</b>	<b>Requirement</b>
ASTM D2369 % Solids by weight .....	> 76%
ASTM D26297 % Solids by volume .....	> 57.9%
Weight per gallon .....	13.9 lbs/gal 6.3kg / 3.78 litre
ASTM D-3723 % Pigment by weight .....	> 62%
Boiling Range .....	212°F - 100°C
ASTM D-3278 Flash Point .....	>230°F - 110°C
Specific Gravity (H2O=1).....	1.67
Vapor Density .....	Heavier than air
Hazardous Ingredients .....	none
Mix Ratio (Coating : LiquidTint) gal/pints .....	5gal / 1pint 18.92 Litre / .473 Litre
Wet mil thickness per coat .....	10 to 15 thousands/inch
Recommended minimum number of coats.....	3

Performance Requirements

**Table:2**

<b>Test</b>	<b>Requirement</b>
Dry Time (to re-coat) @ 50°F (10°C).....	120 min
Dry Time (to re-coat) @ 90°F (32°C).....	30 min
85% Day Cure (to permit traffic) @ 80°F (26°C).....	2 hours
Gloss: ASTM D523 (85° Gardner).....	<3
Hardness: ASTM D3363 .....	3H pencil
Shore Hardness: ASTM D2240 .....	63 Type D
ASTM 2486 Gasoline Scrub Resistance..... To 50% of coating thickness (30 mils).....	>5000 cycles to max loss of 50% coating thickness
ASTM 2486 Motor Oil Scrub Resistance..... To 50% of coating thickness (30 mils).....	>5000 cycles to max loss of 50% coating thickness
Temp. limits for service (of cured material) .....	-35°F to 145°F -37°C to 63°C
ASTM G-155 Color Stability..... QUV 2,000 hrs (CIE units).....	Old Brick Color ΔE < .5
Pedestrian Friction ASTM E303 British Pendulum.....	88 BPN Dry 72 BPN Wet
Mandrel Bend Test ASTM D522.....	>3/16" Pass >.476cm Pass
Water Absorption ASTM D570 7day.....	<9%
VOC Content ASTM D3960.....	<.67oz/1.06 qt <19 grams/liter
Taber Abrasion Dry H-10 ASTM D4060 1day cure.....	.006oz/1000cycles .17g/1000 cycles
Taber Abrasion Wet H-10 ASTM D4060 7day cure.....	.015oz/1000cycles .43g/1000 cycles
Adhesion to Asphalt ASTM D4541 >245 lb./sq.in.....	Cohesive Asphalt Failure prior to Adhesion Failure

### **2.1.2 LiquidTint (STREETCOAT 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.

## **3.0 Delivery, Storage and Handling**

### **3.1 Packaging and Labeling**

All STREETCOAT 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**

STREETCOAT 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 325° F or 163° C ), 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 (60° C) before applying coating. Asphalt mix design shall specified by a qualified Pavement Engineer and shall be designed for the purpose of the application.

### 5.0 **Application**

#### 5.1 Environmental Conditions

Surfaces should be dry for at least 12 hours prior to applying STREETCOAT coatings. 50°F (10°C) is the recommended minimum air and surface temperature. The temperature of the concrete or asphalt surface must be at least 5°F (3°) 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 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.

#### 5.3 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.

## 6 Coating Coverage Rates

6.1 Coating coverage rates shall be determined according to the application as noted in table 5 and 6. The owner may specify a greater thickness if so desired.

**Table: 5**

Coverage Rates for Low Traffic Applications							
Printed / Textured Asphalt				Flat non-printed Asphalt			
Sq Ft Per Kit	M <sup>2</sup> Per Kit	Sq Ft Per Layer	M <sup>2</sup> Per Layer	Sq Ft Per Kit	M <sup>2</sup> Per Kit	Sq Ft Per Layer	M <sup>2</sup> Per Layer
200	18.5	600	55.7	225	20.5	650	60

Note: Two layers for foot and low traffic, Four layers for medium to high traffic.

**Table: 6**

Coverage Rates for High Traffic Applications							
Printed / Textured Asphalt				Flat non-printed Asphalt			
Sq Ft Per Kit	M <sup>2</sup> Per Kit	Sq Ft Per Layer	M <sup>2</sup> Per Layer	Sq Ft Per Kit	M <sup>2</sup> Per Kit	Sq Ft Per Layer	M <sup>2</sup> Per Layer
150	14	600	55.7	175	16	650	60

Note: Two layers for foot and low traffic, Four layers for medium to high traffic.

## 7 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 24 months of starting the project. At least one of these trained personnel shall be on site at all times during the application.

## 8 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. Brick or stone Pattern
2. Brick or stone color
3. Variations of the above if requested

Samples and mockups to be applied to and presented on 24" x 24" x ¼" (60 cm x 60 cm x .6cm) 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 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

Note:

On projects larger than 10,000 square feet (920 m<sup>2</sup>), 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" (5cm x 10cm) lengths of duct-tape or 2" x 4" (5cm x 10cm) 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. (30 m<sup>2</sup>) 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).