# StreetBondSR Specification Help

StreetBond SR Coating

## Part 1 – General

### 1.1 Description

**A.** StreetBond™ coating is a highly specialised coating specifically designed for application onto asphalt pavement as well as concrete surfaces.

**B.** StreetBond™ coating has been specifically formulated to provide the optimal balance of performance properties for a durable, long lasting colour and texture to asphalt or concrete pavement surfaces.

Some of these key properties include wear and crack resistance, colour retention, adhesion, minimal water absorption and increased friction properties.

**C.** StreetBond™ coating performance has been tested and verified by an independent recognised laboratory.

A Certificate of Analysis confirming these test results is available through either an accredited applicator or direct from MPS Paving Systems Australia Pty Ltd (03 9707 0077). Please refer to the certified performance properties of StreetBond coating outlined in Section 2.1 of this specification.

**D.** A variety of standard and custom colours are available to meet all federal or state specifications.

To ensure a quality installation, it is recommended to obtain confirmation of applicator accreditation or qualification from MPS Paving Systems Australia Pty Ltd before proceeding with this work.

### References

**A.** ASTM D-4541 Standard Test Method for Pull-Off Strength of Coatings using Portable Adhesion Tester.

**B.** ASTM D-4060 Test Method for Abrasion Resistance of Organic Coatings by the Taber Abrasion.

**C.** ASTM D522-93A Standard Test Method for Mandrel Bend Test of Attached Organic Coatings.

**D.** ASTM G-155 QUV Accelerated Weathering Environment. Standard Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials.

**E.** ASTM D-2486 MEK rub test for chemical resistance

**F.** ASTM D-570 Standard Test Method for water absorption of plastics.

**G.** ASTM E-303 British Pendulum Test for friction.

**H.** EPA 24 ASTM D3960-05 Volatile Organic Compounds.

## Part 2 - Products

### 2.1 Materials

Materials used for the coating of the asphalt or concrete pavement shall consist of the following:

**A.** StreetBond™ coating is an epoxy-modified polymer coating. It is specifically designed for application on asphalt or concrete pavements to provide a safe, durable, long lasting colour and texture to the pavement surface.

**B.** StreetBond™ coating is environmentally safe and meets EPA requirements for Volatile Organic Compounds (VOC).

**C.** StreetBond™ colourant is a highly concentrated, high quality, UV stable pigment blend designed to be added to the StreetBond coating. It is available in a wide range of standard and custom colours to meet all state specifications.

### 2.2 Performance Properties of StreetBond Coating

The following table outlines performance properties of StreetBond coatings which are backed up by Certificates of Analysis produced by an independent qualified testing facility. MPS Paving Systems Australia Pty Ltd (03 9707 0077) or the Accredited Applicator can provide a copy upon request.

| Characteristics | Test Specification | Measured Result |
|---|---|---|
| Durability<br>Taber Abrasion | ASTM D-4060<br><1 day cure, H-10 wheel cycles (dry) | <0.97g/1000 |
| Water Sensitivity | ASTM D570<br>Water absorption after 9 days<br>Remaining absorption after 1 hour of recovery | <br>8.3%<br>0.4% |
| Colour Stability | ASTM G-155<br>QUV 2,000 (CIE units) | Brick Colour<br>ΔE = 0.49 |
| Flexibility:<br>Mandrel Bend | ASTM D522-93A Flexibility as measured by Mandrel bend<br>0.5mm thick sample passes 6.35mm at 21°C<br>0.5mm thick sample passes 101.6mm at -18°C | |
| Chemical Resistance | ASTM D-2486 Modified MEK scrubs 16 dry mils, number of scrubs until 50% substrate exposed | >5000 |
| Adhesion to Asphalt | ASTM D-4541 | Substrate failure |
| Friction Wet | ASTM E-303 British Pendulum Test | 94 BPN |
| Environmental Sensitivity | EPA 24 ASTM D3960-05<br>Volatile Organic Compounds | VOC 18.7 g/l |

## Part 3 - Execution

### 3.1 General

StreetBond coating shall be supplied and applied by an Accredited Applicator or an applicator designated by MPS Paving Systems Australia Pty Ltd in accordance with the plans and specifications or as directed by the superintendent.

### 3.2 Pre-Conditions

#### 3.2.1 Pavement

The asphalt or concrete pavement should be stable, well compacted and generally in excellent condition for the application of StreetBond™ coating to be successful.

#### 3.2.2 Pavement Marking Removal

Pavement markings may be removed by sandblasting, water-blasting, grinding, or other approved mechanical methods. The removal methods should, to the fullest extent possible, cause no significant damage to the pavement surface. The Superintendant shall determine if the removal of the markings is satisfactory for the application of StreetBond™ coating. Work shall not proceed until this approval is granted.

### 3.3 Application of StreetBond™ Coating

#### 3.3.1 Surface Preparation

**A.** The asphalt or concrete pavement surface shall be dry and free from all foreign matter, including but not limited to dirt, dust, de-icing materials, and chemical residue.

**B.** Either the Accredited Applicator or MPS Paving Systems Australia Pty Ltd services department can advise if StreetBond Primer is required on the preexisting asphalt or concrete pavement or not.

**C.** Note that StreetBond™ primer is not required for new asphalt pavements.

#### 3.3.2 Application of Coating

**A.** The applicator shall apply StreetBond™ coating only when the air temperature is at least 10°C within 8 hours of application of the coating material. There should be no precipitation expected within the 2 hours after the final layer of StreetBond™ coating is dry to touch.

**B.** Each application of StreetBond coating material shall be the same colour and shall be allowed to dry completely before applying the next layer.

**C.** The number of passes or layers of StreetBond™ coating is dependent upon the application. Three layers will generally be sufficient, depending upon the asphalt/concrete pavement texture and traffic.

## Part 3 - Execution

### 3.4 Coating Thickness

| | Thickness (approx) | | | |
|---|---|---|---|---|
| | Wet | | Dry | |
| Spray Passes | mm | ml | mm | ml |
| 3 | 0.65 | 25.7 | 0.36 | 14.1 |
| 4 | 0.87 | 34.3 | 0.48 | 18.9 |

### 3.5 Opening To Traffic

Minimally, the StreetBond coating must be 100% dry before traffic is permitted. TABLE 3 is a guide.

| Air Temprature | Relative Humidity | Time to Dry (approx) |
|---|---|---|
| 15°C | 80% | 8 hours |
| 27°C | 57% | 4 hours |
| 49°C | 5% | 2 hours |

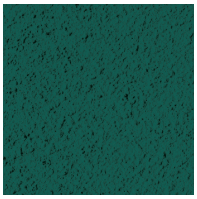
Substrate temperature, wind and humidity can also affect dry times. Generally, warm, and dry conditions decrease the time required for the coatings to dry

StreetBondSR™
Solar Reflective Coatings for Asphalt

## Part 4 – Standard Colour Chart

SR Brownstone
SRI = 31

| | |
|---|---|
| ASTM Method: | E1980 |
| Reflectiveness: | .30 |
| Emittance: | .90 |



SR Evergreen
SRI = 33

| | |
|---|---|
| ASTM Method: | E1980 |
| Reflectiveness: | .32 |
| Emittance: | .88 |

Fawn
SRI = 35

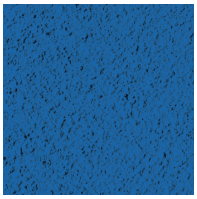
| | |
|---|---|
| ASTM Method: | E1980 |
| Reflectiveness: | .31 |
| Emittance: | .93 |

Irish Cream
SRI = 50

| | |
|---|---|
| ASTM Method: | E1980 |
| Reflectiveness: | .43 |
| Emittance: | .94 |

Khaki
SRI = 37

| | |
|---|---|
| ASTM Method: | E1980 |
| Reflectiveness: | .33 |
| Emittance: | .94 |

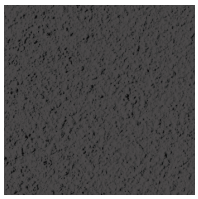


Safety Blue
SRI = 33

| | |
|---|---|
| ASTM Method: | E1980 |
| Reflectiveness: | .30 |
| Emittance: | .93 |

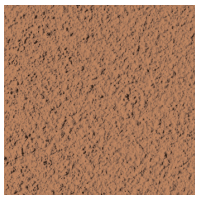
Fashion
Sandstone
SRI = 36

| | |
|---|---|
| ASTM Method: | E1980 |
| Reflectiveness: | .32 |
| Emittance: | .94 |



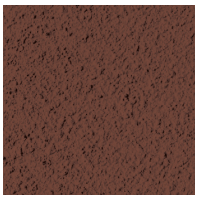
SR Slate
SRI = 34

| | |
|---|---|
| ASTM Method: | E1980 |
| Reflectiveness: | .31 |
| Emittance: | .91 |



Sun Baked Clay
SRI = 52

| | |
|---|---|
| ASTM Method: | E1980 |
| Reflectiveness: | .44 |
| Emittance: | .95 |



SR Terracotta
SRI = 33

| | |
|---|---|
| ASTM Method: | E1980 |
| Reflectiveness: | .31 |
| Emittance: | .92 |

White
SRI = 73

| | |
|---|---|
| ASTM Method: | E1980 |
| Reflectiveness: | .60 |
| Emittance: | .94 |

**Custom colour solutions available upon request.**