Pavement Coating Specification

For:

**StreetBond® Pro 220 Pavement Coating**

**Cycle Lane System**

Prepared by:

StreetBond

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Parsippany, NJ

This specification is provided as a general guide for use of StreetBond products based on typical surface conditions and standard application practices. As a manufacturer of pavement coating systems, StreetBond has no experience, training or expertise in the areas of paving design and installation or in the area of consulting with respect to matters related to such areas. StreetBond recommends that the Owner's representative independently verify the accuracy and appropriateness of a specification provided for a specific project.

SECTION 07 18 16 VEHICULAR TRAFFIC COATINGS (4/2020)pq

PART 1 GENERAL

1.01 SECTION INCLUDES:

A. Evaluation/Preparation of Substrate to Receive Vehicular Traffic Coating

B. Poly(methyl methacrylate-based (MMA) Vehicular Traffic Coating Application

1.02 RELATED SECTIONS.

1. Section [-----] – Submittals
2. Section [-----] – Concrete
3. Section [-----] – Asphalt Pavement

1.03 REFERENCE STANDARDS.

Agencies which may be used as references throughout this specification section include:

NIOSH National Institute for Occupational Safety & Health, Atlanta, GA

OSHA Occupational Safety and Health Administrations, Washington, DC

ICRI International Concrete Repair Institute, Sterling, VA

ACI American Concrete Institute, Farmington Hills, MI

ASTM American Society for Testing and Materials, Philadelphia, PA

SSPC The Society for Protective Coatings, Pittsburgh, PA

FHWA Federal Highway Administration, Washington, D.C.

1.04 SUBMITTALS

All submittals which do not conform to the following requirements will be rejected.

\* NOTE: Coordinate submittal requirements with general provisions. Modify submittals to suit specific project requirements.

A. Submittals Prior to Contract Award Shall Include:

1. Letter from the proposed primary system manufacturer confirming that the bidder is an acceptable Contractor authorized to install the proposed system.

2. Letter from the primary system manufacturer stating that the proposed application will comply with the manufacturer's requirements in order to qualify the project for the specified warranty.

1.05 QUALITY ASSURANCE

A. Acceptable Contractor: Contractor shall be certified in writing by the pavement coating materials manufacturer to install the specified products.

B. Project Acceptance: Submit a completed manufacturer's application for warranty form along with a project plan with drawings of the area to be coated, showing all dimensions, and details. The project must receive approval by the pavement coating manufacturer, through this process, prior to shipment of materials to the project site.

C. Scope of Work: The work to be performed under this specification shall include but is not limited to the following: Attend necessary job meetings and furnish competent and full time supervision, experienced application mechanics, all materials, tools, and equipment necessary to complete, in an acceptable manner, the coating system installation in accordance with this specification. Comply with the latest written application instructions of the manufacturer of the pavement coating products.

D. Local Regulations: Conform to regulations of public agencies, including any specific requirements of the city and/or state of jurisdiction.

E. Manufacturer Requirements: The pavement coating system manufacturer shall provide direct trained company personnel to attend necessary job meetings, perform periodic inspections as necessary, and conduct a final inspection upon successful completion of the project.

F. Product Quality Assurance Program: Primary pavement coating materials shall be manufactured under a quality management system that is monitored regularly by a third party auditor under the ISO 9001 audit process.

1.06 PRODUCT DELIVERY STORAGE AND HANDLING

A. Delivery: Deliver materials in the manufacturer's original sealed and labeled containers and in quantities required to allow continuity of application.

B. Storage: Store closed containers in a cool, dry, well ventilated area away from heat, direct sunlight, oxidizing agents, strong acids, and strong alkalis. Keep products away from open fire, flame or any ignition source. Store temperature sensitive products at temperatures recommended by the manufacturer.

C. Damaged Material: Any materials that are found to be damaged or stored in any manner other than stated above will be rejected, removed and replaced at the Contractor's expense.

D. Handling: Handle all materials in such a manner as to preclude damage and contamination with moisture or foreign matter. Keep away from open fire, flame, or any ignition source. Vapors may form explosive mixtures with air. Avoid skin and eye contact with this material. Avoid breathing fumes. Do not eat, drink, or smoke in the application area. Workers shall wear long sleeve shirts, long pants and work boots. Workers shall wear butyl rubber or nitrile gloves when mixing or applying this product. Safety glasses with side shields shall be used for eye protection. Use local exhaust ventilation to maintain worker exposure below TLV as listed on MSDS for respective products. If the airborne concentration poses a health hazard, becomes irritating or exceeds recommended limits, use a NIOSH approved respirator in accordance with OSHA Respirator Protection requirements under 29 CFR 1910.134. The specific type of respirator will depend on the airborne concentration. A filtering face piece or dust mask is not acceptable for use with this product if TLV filtering levels have been exceeded.

1.07 PROJECT/SITE CONDITIONS

A. Requirements Prior to Job Start

1. Notification: Give a minimum of 5 days notice to the Owner and manufacturer prior to commencing any work and notify both parties on a daily basis of any change in work schedule.

2. Permits: Obtain all permits required by local agencies and pay all fees which may be required for the performance of the work.

3. Safety: Familiarize every member of the application crew with safety regulations recommended by OSHA and other industry or local governmental groups.

B. Environmental Requirements

1. Precipitation: Do not apply materials during precipitation or in the event there is a probability of precipitation during application. Take adequate precautions to ensure that materials and applied coating are protected from possible moisture damage or contamination.

2. Temperature Restrictions – MMA-based Materials: Do not apply resin materials if there is a threat of inclement weather. Follow the resin manufacturer's specifications for minimum and maximum ambient, material, and substrate temperatures. Do not apply resin materials unless ambient and substrate surface temperatures fall within the resin manufacturer's published range.

C. Protection Requirements

1. Protection: Provide protection against staining and mechanical damage for newly applied coating and adjacent surfaces throughout this project.

2. Limited Access: Prevent access by the public to materials, tools, and equipment during the course of the project.

3. Debris Removal: Remove all debris daily from the project site and take to a legal dumping area authorized to receive such materials.

4. Site Condition: Complete, to the Owner's satisfaction, all job site clean-up including building exterior and landscaping where affected by the construction.

1.08 WARRANTY

A. Guarantee: Upon successful completion of the project, and after all post installation procedures have been completed, furnish the Owner with the manufacturer's 1 year limited materials and workmanship warranty.

StreetBond® 1-year Limited Performance Warranty

PART 2 PRODUCTS

2.01 PAVEMENT COATING

A. Vehicular Traffic Liquid Applied Pavement Coating: A fluid-applied, fast curing, anti-skid MMA-based pavement coating for use over concrete and polished asphalt surfaces to receive vehicular traffic. The color of the coating shall be selected by owner/specifier from the manufacturer’s standard palette of colors.

StreetBond® Pro 220 Pavement Coating by StreetBond; Parsippany, NJ

| PRODUCT PROPERTIES | | |
| --- | --- | --- |
| **Property** | **Value** | **Test Reference** |
| Solids Content | *>99%* | ASTM D1644 |
| Density | *0.061 lb/inᶟ (1.7g/cmᶟ)* |  |
| Water Absorption | *<0.25%* | ASTM D570 Method I  (24 hours at 73°F [23°C]) |
| Shore Hardness | *65 – 70 A* | ASTM D2240 |
| VOC Content | *<50 g/l (catalyzed)* | EPA Method 24 |
| Elongation at Break | *>300%* | ASTM D638 |
| Tensile | *>2.0 MPa* | ASTM D638 |
| Minimum thickness | *45 mils (1.2 mm)* |  |
| Dry time to recoat at 68°F (20°C) | *approximately 45 minutes* |  |
| Rain Proof at 68°F (20°C) | *approximately 30 minutes* |  |
| Stress Resistant at 68°F (20°C) | *approximately 2 hours* |  |
| Ambient & Substrate Temperature | *32°F (0°C) - 95°F (35°C)* | See manufacturers mixing chart for detailed temperature ranges. |
| Surface Friction | *>60* | ASTM E303 |

B. Catalyst: A peroxide-based reactive agent used to induce curing of acrylic resins.

Pro Catalyst by StreetBond; Parsippany, NJ

* 1. PAVEMENT COATING ACCESSORIES

1. Quick Setting Primer for Concrete Surfaces: A two-component, epoxy polyamide primer specifically designed to increase the bond of the specifiedcoatings to concrete surfaces, and protect against destructive salts, oils, solvents, and gasoline.

StreetBond® QS Concrete Primer by StreetBond; Parsippany, NJ

B. Cleaning Solution/Solvent: A clear solvent used to clean and prepare transition areas of in-place catalyzed resin to receive subsequent coats of resin and to clean substrate materials to receive resin.

Pro Prep by Siplast; Dallas, TX

PART 3 EXECUTION

3.01 EXAMINATION

1. General: Ensure that surfaces are free from gross irregularities, loose, unsound or foreign material such as dirt, ice, snow, water, grease, oil, bituminous products, release agents, laitance, paint, loose particles/friable matter, rust, de-icing materials, chemical residue or any other material that would be detrimental to adhesion of the coating to the non-textured asphalt pavement surface. Protect areas using plastic sheeting, tarps, coating shields, as necessary to protect adjacent surfaces.

3.02 SURFACE PREPARATION

1. Protection: Provide protection to prevent dust/debris accumulation, spillage and resin overruns.
2. Taping: Utilize masking tape at perimeters and joints of the area to be coated to provide neat terminations.
3. Existing Coatings: Remove pavement markings by sandblasting, pressure-washing, grinding, or other mechanical methods, as approved by the Owner or Owner’s representative.
4. Concrete Surface Preparation: Thoroughly clean the surface of dust and debris using a broom and/or blower. Power wash areas with heavy dirt/debris build-up and where grease and oil contamination is present using an acceptable biodegradable cleaner. Ensure that the substrate is dry prior to applying the specified primer and coating.

NOTE: New concrete mustbe acid etched for adhesion prior to primer application. Evaluate aged concrete and determine whether acid etching is required.

1. Quick-Setting Primer Application (if required): Apply the specified primer at the rate of 1/3 to 1/2 gallon per 100 square feet (1.34 to 2.04 L/10 m2) and according to the manufacturer’s published requirements. Allow the primer to cure prior application of the first layer of coating.

3.03 VEHICULAR TRAFFIC LIQUID APPLIED COATING INSTALLATION

A. Mixing and Catalyzing of Resins: Thoroughly mix the entire drum of uncatalyzed resins for 5 minutes if pouring the resin into a second container when batch mixing. Catalyze only the amount of material that can be used within its pot life. Add pre-measured catalyst to the resin component and stir for 2-minutes using a slow-speed mechanical agitator or mixing stir stick. The amount of catalyst added is based on the weight of the resin used. Refer to the pavement coating manufacturer’s literature for mixing ratios.

B. Pavement Coating Application

1. Apply a layer of catalyzed pavement coating resin using a squeegee at the minimum rate specified by the pavement coating manufacturer. Use a resin saturated nap roller to even the application of the pavement coating resin.

2. If work is interrupted for more than 12 hours, or the surface of a catalyzed resin layer becomes dirty or contaminated from exposure to the elements, thoroughly clean the area with the specified cleaner/solvent. Allow a minimum of 20 minutes for the solvent to evaporate before continuing work. Complete the next application procedure within 60 minutes following the evaporation of the cleaner/solvent.

3.04 FIELD QUALITY CONTROL AND INSPECTIONS

A. Site Condition: All areas around the job site shall be free of debris, coating materials, equipment, and related items after completion of job.

B. Notification Of Completion: Contractor shall notify manufacturer by means of manufacturer's printed Notification of Completion form of job completion in order to schedule a final inspection date.

C. Final Inspection: Hold a meeting at the completion of the pavement coating application attended by all parties that were present at the pre-job conference. A punch list of items required for completion shall be compiled by the Contractor and the manufacturer's representative. Complete, sign, and mail the punch list form to the manufacturer's headquarters.

D. Issuance Of The Warranty: Complete all post installation procedures and meet the manufacturer's final endorsement for issuance of the specified warranty.