

SealMaster Asphalt Sealcoating

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Engineering Specification: SealMaster Polymer Modified MasterSeal (PMM) Ultra -Quick Spec.

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ASPHALT PAVEMENT SEALCOATING SPECIFICATION

Specifier's Notes: This Asphalt Pavement Sealcoating Specification is furnished as a guide for specifying Asphalt Repair, Sealcoating and Striping of Asphalt Pavement Parking Lots and Roads. It is written in the CSI 3-Part Format and must be edited to suit the needs and budgetary requirements of a given project and its respective location (job specific).

If you need more specific information regarding a product visit www.sealmaster.net or contact your local SealMaster Representative at 1-866-289-6767. SealMaster Representatives are also available to answer any questions you may have regarding your specific project.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Asphalt Pavement Sealcoating

1.2 REFERENCE STANDARDS

- A. American Society for Testing Materials (ASTM)
 - 1. D 2939-03 Standard Test Methods for Emulsified Bitumens Used as Protective Coatings
 - 2. The following ASTM test methods: D140, D466, D529, D244, C88, C131, C117, C127, C123, D1310, D2170, D95, D402, D2171, D5, D113, D2042, D711, D969, D1475, D3960, D2486, E70, D562, D3583, D3236, D5249, D6690, B117, D977
 - 3. Polymer Modified MasterSeal Ultra meets ASTM D8099/D8099M-17 Standard Specification for Asphalt Emulsion Pavement Sealer and FAA Item P-623 Specification for Emulsified Asphalt Spray Sealcoat.
- B. South Coast Air Quality Management District
 - 1. SCAQMD Method 304 – Determination of Volatile Organic Compounds (VOC) In Various Materials.
- C. Federal Specifications for Waterborne Traffic and Airfield Marking Paints
 - 1. TT-P-1952E Types I, II, and III
 - 2. TT-P-1952D
 - 3. TT-P-1952B

1.3 SUBMITTALS

A. Product Data

1. Submit manufacturer's Product Data Sheet.

1.4 PROJECT/SITE CONDITIONS

A. Ambient Conditions

1. Both surface and ambient temperature must be a minimum of 50°F and rising before applying cold applied crack fillers, oil spot primers, pavement sealers or traffic paints (materials). Ambient and surface temperature shall not drop below 50°F for a 24-hour period following application of materials.
2. Apply materials during dry conditions when rain is not imminent or forecast for at least 24 hours after application.

B. Pavement/Surface Conditions

1. Newly placed (paved) asphalt pavement surfaces should be allowed to cure before applying coatings.
2. New pavement surfaces shall be free of residual oils or chemicals associated with the placement of new asphalt pavement.
3. Aged pavement surfaces shall be cleaned and prepared as recommended in this specification under PART 3 Sections 3.1 thru 3.7 of this specification.

PART 2 PRODUCTS

2.1 MANUFACTURER

- #### **A. SealMaster Pavement Products and Equipment.** SealMaster has a nationwide network of manufacturing and distribution facilities. Phone: 800-395-7325. Website: www.sealmaster.net. E-mail: info@sealmaster.net.

2.2 MATERIALS

- A. SealMaster Petro Seal Oil Spot Primer (Concentrate)
- B. SealMaster Prep Seal Oil Spot Primer (Ready-To-Use)
- C. SealMaster FlexMaster Crack Sealant (Cold-applied pourable crack sealant)
- D. SealMaster CrackMaster Parking Lot Grade (Hot Pour Rubberized Crack Sealant)
- E. SealMaster Trowel Grade Crack Filler
- F. SealMaster GatorPave Patching Material

- G. SealMaster Pothole Patch (Cold Patch)
- H. SealMaster Asphalt Binder Plus
- I. SealMaster Polymer Modified MasterSeal Ultra
- J. SealMaster Liquid Thermoplastic Traffic Marking Paint (White and Yellow)
- K. SealMaster Fast-Dry Traffic Paint (White and Yellow)
- L. SealMaster TTP-1952B Traffic Paint (White and Yellow)
- M. SealMaster Handicap Blue Traffic Paint
- N. SealMaster Firelane Red Traffic Paint
- O. SealMaster Line Block-Out Paint (Black)

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine pavement surface prior to performing work
- B. Notify architect or project engineer of any adverse or unacceptable conditions that would affect successful repair efforts or application of materials
- C. Do not commence work until unacceptable conditions are corrected

3.2 SURFACE PREPARATION

- A. Surface must be clean and free from all loose material and dirt. Remove grass along edge of pavement to find true edge of pavement. Power blowers, mechanical sweeping devices and push brooms are acceptable cleaning methods.
- B. Tack Coating (Optional)
- C. Tack Coating (priming surface) with diluted SealMaster Asphalt Binder, SS1h or CSS1h asphalt emulsion is beneficial on extremely oxidized and weathered road surfaces.
- D. Dilute 1 part SealMaster Asphalt Binder, SS1h or CSS1h with 4 parts of water.
- E. Apply one thin coat of diluted asphalt emulsion at a rate of .05 to .10 gallon per square yard.
- F. Allow tack coat to dry thoroughly before applying Liquid Road Ultra.

3.3 CRACK REPAIR

Specifier's Notes: Specifier should select between Option A. (Fill Cracks with Cold-Applied Sealants and/or Crack Fillers) or Option B. (Fill Cracks with Hot Applied Rubberized Asphalt Crack Sealant) listed below. Hot Applied Rubberized Crack Sealant provides a more durable solution for crack filling. However, Cold-Applied Materials offer an acceptable and more economical approach.

- A. Cold Applied Crack Filling Materials and Methods
 - 1. Clean cracks of all dirt, debris and vegetation prior applying crack filling.
 - 2. For cracks up to ½” apply FlexMaster Crack Sealant. FlexMaster may be applied directly from container, pour pot, crack banding equipment or mechanized pumping equipment. Allow to dry before sealcoating.
 - 3. For cracks larger than ½” wide and up to 1” wide apply SealMaster Trowel Grade Crack Filler or SealMaster GatorPave Patching material. Apply Trowel Grade or GatorPave with trowel, squeegee or straightedge. Allow to dry before sealcoating.
 - 4. Contractor or other Entity Responsible for performing work shall refer to Manufacturer’s Product Data Sheet for more detailed application instructions for Flexmaster, Trowel Grade Crack Filler and GatorPave.

- B. Hot Applied Crack Sealant/Filling Materials and Methods
 - 1. Cracks must be free from dust, dirt, vegetation and moisture. Clean cracks with mechanical wire brush followed by a compressed air heat lance to remove loose debris and moisture.
 - 2. For all cracks up to 1” wide apply either SealMaster CrackMaster Parking Lot Grade crack sealant or SealMaster Crackmaster Supreme crack sealant.
 - 3. SealMaster CrackMaster Parking Lot Grade crack sealant shall be melted in a conventional oil-jacketed unit equipped with an agitator.
 - 4. Apply heated CrackMaster Parking Lot Grade crack sealant using a pump and wand system, a crack banding unit, or a pour pot.
 - 5. Contractor or other Entity Responsible for performing work shall refer to Manufacturer’s Product Data Sheet for more detailed application instructions for CrackMaster Parking Lot Grade Crack Sealant.

3.4 ALLIGATORED PAVEMENT REPAIR

Specifier’s Notes: Alligator cracks are interconnected cracks forming a series of small blocks resembling an alligator’s skin or chicken wire. Specifier should select between Option A. (Apply SealMaster GatorPave), Option B. (Infrared Patch Repair Method) or Option C. (Removal of distressed pavement material and replacement with 4 inches of Hot Mix Asphalt). With regards to longevity of pavement repair, these options represent a good (A), better (B), best (C) approach.

- A. Repair Alligator Cracks with SealMaster GatorPave
 - 1. Remove all dirt, dust, and vegetation on alligatored area.
 - 2. Apply GatorPave with trowel, squeegee, or straightedge.
 - 3. Allow to dry before sealcoating.
 - 4. Contractor or other Entity Responsible for performing work shall refer to Manufacturer’s Product Data Sheet for more detailed application instructions for GatorPave.

- B. Repair Alligator Cracks with Infrared Heater Method

1. Remove all dirt, dust, and vegetation on alligatored area.
 2. Heat alligatored pavement area to a temperature between 290°F and 325°F to soften pavement. Scarify heated softened asphalt with an asphalt rake to a depth of 2-3 inches. Add SealMaster Asphalt Binder Plus at a rate of 0.20 gallon per square yard while pavement material is still soft and workable. Mix Asphalt Binder Plus into heated softened asphalt with the asphalt rake. Level smooth with rake and compact area with either a plate compactor or asphalt roller. Note- A small amount of fresh Hot Mix blacktop may be added to heated material if needed to assure a smooth, flush finish to adjoining pavement surface.
 3. Contractor or other Entity Responsible for performing work shall refer to Manufacturer's Product Data Sheet for more detailed application instructions for SealMaster Asphalt Binder Plus.
- C. Repair Alligator Cracks with Full-Depth Hot Mix Asphalt
1. Saw cut and remove the alligatored pavement to the depth necessary to reach firm support (firm base materials).
 2. Prime bottom of patch area and vertical sides of saw cut with SealMaster Asphalt Binder Plus.
 3. Fill patch area with fresh hot mix asphalt.
 4. Compact fresh hot mix with hand tamper, vibratory-plate compactor, or asphalt roller. Finished patchwork shall be flush and level with adjoining pavement.
 5. Contractor or other Entity Responsible for performing work shall refer to Manufacturer's Product Data Sheet for more detailed application instructions for SealMaster Asphalt Binder Plus.

3.5 POTHOLE REPAIR

Specifier's Notes: Specifier should select between Option A. (Fill Potholes with SealMaster Pothole Patch (Cold Patch)) or, Option B. (Fill Potholes with Hot Mix Asphalt). Hot Mix Asphalt provides a more durable solution for patching. However, SealMaster PatchMaster Pothole Patch offers an acceptable and more economical approach to filling potholes.

- A. Fill Potholes with SealMaster PatchMaster Pothole Patch
1. Remove loose material, debris and standing water from pothole prior to application.
 2. Apply PatchMaster directly from bag into pothole
 3. Compact PatchMaster with a hand tamper, vibratory-plate compactor or asphalt roller. Finished patchwork shall be flush and level with adjoining pavement.
 4. Contractor or other Entity Responsible for performing work shall refer to Manufacturer's Product Data Sheet for more detailed application instructions for SealMaster PatchMaster Pothole Patch.

3.6 OIL SPOT PRIMING

- A. Prime Oil Spots with SealMaster Prep Seal or SealMaster Petro Seal

1. Wipe or scrape excessive build-up of oil, grease, and gasoline spots. A torch may be used to burn away any residual.
2. Apply oil spot primer with brush, roller or sprayer.
3. Allow to dry before sealcoating.
4. Contractor or other Entity Responsible for performing work shall refer to Manufacturer's Product Data Sheet for more detailed application instructions for SealMaster Prep Seal or SealMaster Petro Seal.

3.7 LINE BLOCK-OUT PAINT

Specifier's Notes: SealMaster Line Block-Out Paint should only be used when specifier is changing the pattern or lay-out of existing traffic markings. If pattern and lay-out of existing traffic markings will remain the same after applying sealcoating materials, then Line Block-Out Paint is not necessary.

- A. Applying SealMaster Line Block-Out Paint
1. Remove all loose material and dirt from existing traffic markings.
 2. Apply SealMaster Line Block-out paint with pressurized spray equipment, brush or roller.
 3. Allow to dry before sealcoating.
 4. Contractor or other Entity Responsible for performing work shall refer to Manufacturer's Product Data Sheet for more detailed application instructions for SealMaster Line Block-Out Paint.

3.8 POLYMER-MODIFIED MASTERSEAL (PMM) ULTRA APPLICATION

Specifier's Notes: For non-computerized rate control equipment, a minimum of two coats of Polymer-Modified MasterSeal Ultra is recommended for the entire pavement surface to be sealcoated. One spray coat with computerized rate control equipment is accepted. These are only recommendations, and each project is "job specific".

- A. Applying SealMaster Polymer-Modified MasterSeal Ultra
1. Remove all loose material and dirt from pavement surface. Remove grass along edge of pavement to find true edge of pavement. Power blowers, mechanical sweeping devices and push brooms are acceptable cleaning methods.
 2. Equipment used to apply Polymer-Modified MasterSeal Ultra shall have continuous agitation or mixing capabilities to maintain homogeneous consistency of pavement sealer mixture throughout the application process. Spray equipment shall be capable of mixing and spraying pavement sealer with sand added. Self-propelled squeegee equipment with mixing capability shall have at least 2 squeegee or brush devices (one behind the other) to assure adequate distribution and penetration of

sealer into pavement surface. Hand squeegees and brushes shall be acceptable in areas where practicality prohibits the use of mechanized equipment.

3. Mix PMM Ultra thoroughly before applying.
Note: If required, a small amount of water may be added to facilitate application of mixed material.
4. Apply two coats of mixed PMM Ultra at a rate of 0.11 to 0.13 gallon per square yard per coat to entire pavement area. Allow first coat to dry thoroughly before applying second coat. One coat is accepted with computerized rate control equipment and applied at a minimum of 0.22 and up to 0.45 gallons per square yard, depending on pavement condition.
5. Allow pavement sealer to dry prior to applying SealMaster 100 % Acrylic Water based Traffic Paint.

3.9 TRAFFIC MARKINGS/LINE STRIPING

Specifier's Notes: Specifier should select between Option A. (SealMaster TT-P-1952B Traffic Paint- White or Yellow), Option B. (SealMaster Fast Dry Traffic Paint- White or Yellow), or Option C. (SealMaster Liquid Thermoplastic Traffic Paint- White or Yellow). These options represent a good (A), better (B), or best (C) approach to material selection. All materials are 100% Acrylic water-base. With regards to Handicap parking stalls; a square section of handicap blue is applied and allowed to dry, followed by a white handicap symbol painted in the center of the blue area. Firelane Red Traffic Paint is designed to paint curbing designated as a fire zone (specifier should designate such areas).

- A. Applying SealMaster Traffic Paint
 1. Remove all loose material and dirt from existing pavement. Freshly applied pavement sealer shall be allowed to cure prior to applying Traffic paint.
 2. Apply SealMaster Traffic Paint with pressurized line striping spray equipment at wet thickness of 15 to 20 mils.
 3. Apply SealMaster Handicap Blue to all handicap parking spots.
 4. Apply SealMaster Firelane Red Traffic Paint to areas designated as Fire Zones (by specifier).
 5. Allow paint to dry thoroughly prior to opening to traffic.

END OF SECTION

