

EXHIBIT 'B'

DIVISION 2 – SITE CONSTRUCTION

SECTION 02740 - FLEXIBLE PAVEMENT

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Joint sealer.
2. Oil Spot Primer
3. Surface sealer.

B. Related Sections:

1. Section 02760 – Paving Specialties

1.02 REFERENCES

A. SealMaster Products, or approved equal.

1. See the “Technical Data” section of the enclosed product specification sheets

B. Commonwealth of Pennsylvania, Department of Transportation:

1. Publication 408, latest revision:
 - a. Section 469 – Asphalt Joint and Crack Sealing.
 - b. Section 470 – Bituminous Seal Coat.
2. Publication 35 – Approved Construction Materials (Bulletin 35), latest edition.

1.03 DEFINITIONS

A. PennDOT: Pennsylvania Department of Transportation.

1.04 QUALITY ASSURANCE

A. Obtain materials from same source throughout.

B. Qualifications:

1. Installer must be listed as an Approved Contractor by PennDOT, or
2. Be able to provide the Owner references for a minimum of three (3) completed projects of similar nature, and any additional detailed experience information requested by the Owner.

1.05 ENVIRONMENTAL REQUIREMENTS

A. Placement of materials shall be in accordance with the installation specifications of the manufacturer.

- B. Ambient air and surface temperatures shall be verified prior to placement of materials.

PART 2 - PRODUCTS

2.01 PAVEMENT JOINT SEALANT

- A. Pavement cracks/joints greater than ¼": Single component, hot-applied rubberized asphalt crack and joint sealant, CrackMaster Supreme Hot Pour Crack Sealant, as manufactured by ThorWorks Industries, Inc. (1-800-326-1994), or approved equal.

2.02 PAVEMENT OIL SPOT PRIMER

- A. Pavement oil spot primer shall be a latex based emulsion, Petro Seal Oil Spot Primer, as manufactured by ThorWorks Industries, Inc. (1-800-395-7325), or approved equal.

2.03 PAVEMENT SEAL COATING

- A. Pavement seal coating shall be a clay-stabilized, fuel-resistant coal tar emulsion sealer, SealMaster Coal Tar Concentrate Pavement Sealer, (1-800-395-7325), or approved equal.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify bituminous pavement surface is dry and clean from debris.

3.02 PAVEMENT JOINT SEALANT

- A. Apply joint sealant in accordance with manufacturer's specifications and guidelines.

3.03 PAVEMENT OIL SPOT PRIMER

- A. Apply oil spot primer in accordance with manufacturer's specifications and guidelines.

3.04 PAVEMENT SEAL COATING

- A. Apply seal coating in accordance with manufacturer's specifications and guidelines.

3.05 TOLERANCES

- A. All work shall be installed to tolerances in accordance with the manufacturer's specifications and guidelines.

3.06 PROTECTION OF FINISHED WORK

- A. All work shall be protected in accordance with manufacturer's specifications and guidelines.

END OF SECTION

DIVISION 2 – SITE CONSTRUCTION
SECTION 02760 - PAVING SPECIALTIES

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Liquid traffic paint materials.

1.02 RELATED SECTIONS

- A. Section 02740 – Flexible Pavement

1.03 REFERENCES

- A. Commonwealth of Pennsylvania, Department of Transportation, Publication 408/2000 – Specifications, as amended.
 - 1. Section 901, Maintenance and Protection of Traffic During Construction.
 - 2. Section 962, Painting Traffic Lines and Markings.
 - 3. Section 963, Pavement Marking Removal.
 - 4. Section 1103, Traffic Signing and Marking.
- B. Commonwealth of Pennsylvania, Department of Transportation, Publication 35, Approved Construction Materials (Bulletin 15), as amended.
- C. Commonwealth of Pennsylvania, Department of Transportation, Publication 68, Regulations – Traffic Signs, Signals and Markings, as amended.
- D. Commonwealth of Pennsylvania Code, Title 67, Department of Transportation, Chapter 203, Work Zone Traffic Control.
- E. American Society for Testing and Materials:
 - 1. ASTM D711-89(1998) Standard Test Method for No-Pick-Up Time of Traffic Paint.
 - 2. ASTM D868-85(1998) Standard Test Method for Evaluating Degree of Bleeding of Traffic Paint.
 - 3. ASTM D969-85(1998) Standard Test Method for Laboratory Determination of Degree of Bleeding of Traffic Paint
 - 4. ASTM D1309-93 (1998) Standard Test Method for Settling Properties of Traffic Paints During Storage.
- F. Federal Standard 595B – Colors, 1989, as amended.
- G. Institute of Transportation Engineers, Equipment and Material Standards of the Institute of Transportation Engineers, “A Model Performance Specification for the Purchase of Pavement Marking Paints and Powders”, 2001, as amended.
- H. Environmental Protection Agency, Code of Federal Regulations 40, Section 261.24.

1.04 SUBMITTALS

A. Product Data

1. Liquid traffic paint.

B. Certificates

1. Manufacturer's pavement marking material certification that the material meets or exceeds:
 - a) PennDOT Publication 408, Section 1103 – Traffic Signing and Marking.
 - b) Institute of Transportation Engineers, Equipment and Material Standards of the Institute of Transportation Engineers, "A Model Performance Specification for the Purchase of pavement marking Paints and Powders".

C. Manufacturer's Instructions

1. Application method, mixing instructions and surface preparation for:
 - a) Liquid Traffic Paint.

D. Qualification Statements

1. Qualified as a PennDOT Prime Contractor.

1.05 DELIVERY, STORAGE AND HANDLING

- ### A. Deliver pavement marking materials to job site in their original, sealed containers or packages with intact and legible labels at time of use.

1. Store paint containers lid-down.
2. If the paint is used within two months after being received, no rotation prior to use is required. If the paint is on hand for more than two months, rotate paint several days before use.

- ### B. Store approved materials at the job site in a suitable and designated area restricted to storage of pavement marking materials and related equipment.

- ### C. Ensure safe storage of pavement marking materials and the prompt and safe disposal of waste. Store all products protected from weather when such products may be affected by freezing or high temperatures.

1.06 PROJECT CONDITIONS

A. Environmental Requirements:

1. Adhere to manufacturer's data on air and surface temperature limits and relative humidity during application and curing of pavement markings.
2. Schedule work to avoid dust and airborne contaminants.

B. Protection:

1. Protect pavement marking materials before, during, and after application.

2. Remove pavement marking material from curbs, sidewalks, or other improvements due to overspray, spills, or other reasons.

1.07 WARRANTY

- A. For a period of one year from the Date of Substantial Completion, replace any pavement marker, portion of the pavement marker, or legend material that has proven defective.
- B. For a period of 180 days from the Date of Substantial Completion, replace all defective liquid traffic paint markings demonstrating a loss of reflectivity, wear, or poor adhesion resulting from defective materials or workmanship.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Liquid traffic paint markings: Ready-mixed pigmented binder in a single package system suitable for application to traffic bearing surfaces such as Portland cement concrete, asphalt concrete pavements and plain or vitrified brick surfaces of streets, highways, bridges, tunnels, and parking lots.
 1. PennDOT Publication 408, Section 1103: Type 1 and Type 2.
 2. Institute of Transportation Engineers, Equipment and Material Standards of the Institute of Transportation Engineers, "A Model Performance Specification for the Purchase of Pavement Marking Paints and Powders".
 3. ASTM D 868.
 4. ASTM D 1309.
 5. Consist of either an alkyd resin type or a combination of alkyd resin type modified with chlorinated rubber ready-mixed white and yellow traffic paints, for use on asphalt concrete and Portland cement concrete pavements. Retroreflectorized for night visibility by adding glass beads before the paint dries or sets using pressurized methods.
 - a) Pigments:
 - 1) White: Provide combination of pigments to meet requirements specified herein. Provide sufficient suspending and dispersing agents to prevent excessive settling.
 - 2) Yellow: Provide organic yellow pigment to meet requirements specified. Do not use metals listed in Environmental Protection Agency (EPA) Code of Federal Regulations 40, Section 261.24, Table 1. Provide sufficient suspending and dispersing agents to prevent excessive settling.
 - a. Color No. 33538 of Federal Standard 595B.
 - b) Binder: Provide combination of ingredients, except oil resins, to meet requirements specified. Provide sufficient amounts of anti-skinning agents prevent skinning as specified herein. Provide resin solids, compatible thinners and driers, to meet requirements of Schedule 1.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Maintenance and protection of traffic: PA Code Title 67, Chapter 203 – Work Zone Traffic Control.

- B. Removal of pavement markings: PennDOT Publication 408, Section 963.
- C. Old asphalt and concrete road surfaces:
 - 1. All surfaces must be clean, dry, and free of surface contaminants such as oil, laitance, and curing compounds.
 - 2. Existing lines must be in good condition, and adhering well to the roadway. Mechanically remove oil, laitance, curing compounds, and loose, chipping, flaking lines prior to pavement marking application.
- D. Surfaces: Dry and blown or swept clean just before application.
- E. Surface temperature range for application: 30-110 F.

3.02 APPLICATION

- A. Application of pavement markings:
 - 1. PennDOT Publication 408, Section 963.
 - 2. PennDOT Publication 68.
- B. Line painting machine shall not impede the traffic flow in adjacent lanes while painting of centerlines. Maintain one lane open to traffic while painting edge lines.
- C. Liquid traffic paint marking:
 - 1. Equipment:
 - a) Capable of simultaneous application of two parallel lines in either a solid or broken pattern in forming the centerline.
 - b) Equipped with a measuring device that automatically and continuously measures the length of each line type placed to the nearest foot.
 - 2. Centerline:
 - a) Where existing centerlines are visible and properly located, the new centerlines shall be applied directly over the existing pattern.
 - 3. Application:
 - a) Paint: Dispensed in a wet film thickness of 15 mils. At the direction of the engineer, apply paint on bituminous surface treatment roads 25% greater than 15 mils.
 - b) Apply when the air temperature is greater than 40 F.
- D. Tolerances:
 - 1. Width: 0.25-inches.
 - 2. Lateral: 3-inches over 10-foot length.
 - 3. Film thickness: 1 mil.

- E. Repair any marking deemed to be defective by the engineer for not being within the limits or tolerances specified prior to project final acceptance.

3.03 PROTECTION PAVEMENT MARKINGS

- A. Provide protection of markings from vehicular traffic in accordance with manufacturers recommendations.
- B. Traffic is to be kept off MMA until it has dried sufficiently to prevent dirt pick-up or tracking.

3.04 SCHEDULES

Schedule 1 – Requirements of Mixed Paints

Characteristic	Value
Pigment, percent by weight	55 to 60
Nonvolatile vehicle, percent by weight of vehicle	40 minimum
Uncombined water, percent by weight of paint	1.0 maximum
Coarse particles and skins (retained on No. 325 sieve, I/Percent by weight of pigment)	1.0 maximum
Consistency: Kreb units	65 to 75 (Type 1) 70 to 110 (Type 2)
Weight per gallon, lbs.: White Yellow	11.7 minimum 12.0 minimum
Fineness of grind, Hegman	2.0 minimum
Contract ratio, dry	0.96 minimum
Directional reflectance.: White Yellow	84 minimum 50 minimum
Drying time, No pick-up, minutes (lab) – ASTM D-711	30 maximum
Flexibility	No cracking or flaking
Bleeding Test – ASTM D-868 and ASTM D-969	5 minimum
Skinning (48 hours)	None
Storage Stability – ASTM D-1309	6 minimum

END OF SECTION

1. PRODUCT NAME

CrackMaster Supreme
 Hot Pour Crack Sealant

2. MANUFACTURER

ThorWorks Industries, Inc.
 2520 S. Campbell St.
 Sandusky, OH 44870
 Phone: 800-326-1994
 Fax: 419-626-5477
 www.thorworks.com

Additional Plant Locations:
 SealMaster has a nationwide network of manufacturing and distribution facilities.

Phone 1-800-395-7325 or visit website at www.sealmaster.net to find the location near you.

3. PRODUCT DESCRIPTION & BENEFITS

CrackMaster Supreme is a single component, hot-applied, rubberized asphalt crack and joint sealant. CrackMaster Supreme is specially formulated for both direct fire and oil-jacketed melters. It is heat stabilized to withstand temperatures up to 450°F without experiencing polymer degradation. When melted and properly applied it forms a resilient crack sealant for both asphaltic and cementitious pavements. CrackMaster Supreme meets manufacturer's specifications.

Basic Uses: CrackMaster Supreme is designed to seal expansion joints, longitudinal and transverse cracks, joints between concrete and asphalt shoulders, and random cracks in both asphalt and concrete pavements. CrackMaster Supreme is relatively hard and has a high softening point, which makes it well suited for parking lots and driveways.

Composition: As supplied, CrackMaster Supreme is supplied in solid blocks comprised of heat stabilized polymers and asphalt.

Sizes: CrackMaster Supreme is supplied in 50 lb. cardboard cartons containing two 25 lb. blocks of material per carton.

Color: Black.

Limitations: Do not overheat material. Cracks must be free from moisture, dust, loose aggregate and other contaminants prior to application.

4. TECHNICAL DATA

CrackMaster Supreme meets the following material requirements when tested in accordance with ASTM D6690. (see chart below).

Environmental Considerations: CrackMaster Supreme is considered a non-hazardous material.

5. INSTALLATION

Proper surface preparation will facilitate adequate adhesion and consequently the maximum service life of the sealant. The crack must be free from moisture, dust, and loose aggregate. Routing or wire brushing are preferred methods followed by a compressed air heat lance immediately prior to sealing. The substrate and air temperature must be above 40°F.

Methods: CrackMaster Supreme may be melted in direct fired or oil jacketed melters. Carefully insert blocks of material (with plastic bag) into melting equipment with agitator turned off. Load material slowly to avoid splashing. After the initial load of material has reached the recommended pouring temperature (350-400°F), fresh material may be added as sealant

is used. Melt only enough material that will be used the same day. Avoid overheating material. Excessive heat could cause material to gel in the equipment or fail in crack and joints. A significant viscosity increase accompanied by stringiness signals the approach of gelation. If this occurs, immediately remove the material from the melter and dispose of it.

IMPORTANT: Protective apparel is recommended with application of CrackMaster Supreme. The extremely hot material will cause severe burns on contact with skin. OSHA Safety Regulations require workers to wear the following types of safety attire (see current OSHA/Safety Regulations for additional information): Hard hat with face shield; long sleeved shirt buttoned at the wrist; heat resistant gloves; long, cuffless pants; and safety toed work boots. Make certain all area around melter is clear of all debris and flammable materials. Avoid breathing vapors. Use with adequate ventilation.

Mixing Procedures: Use material as supplied. Do not blend with other materials.

Application: Apply heated CrackMaster Supreme using either a pump and wand system or a pour pot. For best results the sealant depth to width ratio should not exceed 2 to 1 (i.e. 2-inches deep to 1-inch wide). The cooled sealant

Chemical & Physical Analysis

Recommended Application Temperature	350 - 400°F
Maximum Heating Temperature	450°F
Cone Penetration at 25°C	50 Max.
Flow at 60°C, mm.....	0
Softening Point	200°F Min.
Resiliency, %.....	60% Min.
Flexibility, 0°F.....	(1" Mandrel) - PASS
Specific Gravity	1.17
Asphalt Compatibility	PASSES

CrackMaster Supreme
 Hot Pour Crack Sealant
 SMT - 190

SealMaster
 August 2005
 Supersedes SMT-13 (4/99), SMT-190 (10/01), SMT-190 (7/04)

PAVING AND SURFACING
 Pavement Sealer

CrackMaster™ Supreme Hot Pour Crack Sealant

height should not exceed 1/8" above surrounding pavement. Using a sealing shoe or squeegee, band the material 2 to 3 inches wide over the crack.

Estimating Material Requirements:

Use the following chart as a guideline for estimating material requirements (based upon pounds of material needed for 100 feet of cracks):

Crack Width	Depth	lbs/100feet
3/8"	3/8"	6.2 lbs.
3/8"	1/2"	8.3 lbs.
1/2"	1/2"	11.1 lbs.
1/2"	1"	22.2 lbs.
3/4"	1/2"	16.6 lbs.
3/4"	3/4"	25.0 lbs.

The above coverage rates are only a guideline. Actual material usage may vary due to width of application and thickness of material above pavement surfaces.

Precautions: Cracks must be free from moisture, dust, dirt, and debris. Both substrate and air temperature must be above 40°F. Keep boxes of material dry during storage. Do not store in direct sunlight.

6. AVAILABILITY & COST

Availability: CrackMaster Hot Pour Crack Sealants are supported by a nationwide network of SealMaster facilities along with a national and international network of professional applicators.

Cost: Cost information can be obtained from a local SealMaster CrackMaster applicator. Contact SealMaster for the CrackMaster representative in your area.

7. WARRANTY

SealMaster warrants that CrackMaster Supreme meets the chemical composition and performance requirements set forth in section 4. Liability to the buyer or user of this product is limited to the replacement value of the product only.

9. TECHNICAL SERVICES

Manufacturer: Complete product specifications, material safety data sheets, and technical assistance is available from SealMaster.

Professional Applicators: Your local CrackMaster applicator is available to provide on-site inspections and recommendations to meet your specific needs.

10. FILING SYSTEMS

- SealMaster Online Specification at www.sealmaster.net
- Complete SealMaster Product and Equipment Catalog Available
- Sweet's Catalog
- Sweet's CD
- Sweet's Online
- Sweet's Directory

The statements made in this specification sheet are believed to be true and accurate and are intended to provide a guide for approved application practices. As workmanship, weather, construction, condition of pavement, tools utilized, and other variables affecting results are all beyond our control, the manufacturer warrants only that the material conforms to product specifications and any liability to the buyer or user of this product is limited to the replacement value of the product only. The manufacturer expressly disclaims any implied warranties of merchantability or fitness for a particular purpose. Warranty is void on multi-coat applications if material made by other manufacturers is used with this product.

Form No.: SMT-190

Revised: 8/05

Supersedes: SMT-13 (4/99), SMT-190 (10/01), SMT-190 (7/04)

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Sandusky, OH 44870

Phone: 1-800-326-1994

FAX: 1-419-626-5477

www.sealmaster.net

SealMaster®

Pavement Products & Equipment

1. PRODUCT NAME

Petro Seal™ Oil Spot Primer

2. MANUFACTURER

ThorWorks Industries, Inc.
 2520 S. Campbell St.
 Sandusky, OH 44870
 Phone: 800-395-7325
 Fax: 419-626-5477
 www.thorworks.com

Additional Plant Locations:

SealMaster has a nationwide network of manufacturing and distribution facilities.

Phone 1-800-395-7325 or visit website at www.sealmaster.net to find the location near you.

3. PRODUCT DESCRIPTION & BENEFITS

Petro Seal is a concentrated latex based emulsion designed for sealing and priming oil spots on asphalt pavement prior to applying pavement sealer. Petro Seal helps prevent oil and gas from bleeding up through freshly applied asphalt or coal tar based pavement sealer. Petro Seal is a concentrated material that can be diluted up to 2 parts water to one part Petro Seal.

Basic Uses: For any asphalt pavement surface including parking lots, driveways, airports, and more.

Composition: Petro Seal is a latex emulsion blend containing specialty surfactants designed for priming petroleum based stains.

Sizes: Petro Seal is available in 5 and 55-gallon containers.

Limitations: Petro Seal shall not be applied when temperature is expected to drop below 50°F within a twenty-four period after application.

4. TECHNICAL DATA

Environmental Considerations: Petro Seal is an environmentally friendly water based latex emulsion containing less than 150 grams per liter volatile organic content (VOC).

Physical/Chemical Properties:

Petro Seal meets the following material requirements when tested in accordance with ASTM D4758 and ASTM D2939 (see chart below).

5. INSTALLATION

Surface must be free from dirt and dust. Wipe up or scrape excessive build-up of oil, grease, and gasoline spots. A torch may be used to burn away any residual.

Methods: Petro Seal shall be applied by roller, brush, or spray application tools.

Mixing Procedures: Petro Seal is supplied in concentrate form. Petro Seal can be diluted up to 2 parts water to 1 part Petro Seal. However, a 1 to 1 dilution rate is typically recommended. Mix thoroughly before applying.

Application: Apply mixed Petro Seal with roller, brush, or spray. Allow to dry completely before applying pavement sealer. NOTE: A small amount of sand may be broadcast onto wet Petro Seal. Once dry, this will help create an improved mechanical bond between the Petro Seal and the pavement sealer.

Application Rate of Mixed Petro Seal: Apply properly mixed Petro Seal (Petro Seal, Water) at a rate of approximately 150-200 square feet per gallon.

Estimating Material Requirements:

One gallon of Petro Seal Concentrate when mixed 1 to 1 with water will cover approximately 300-400 square feet. NOTE: Coverage rates may vary due to dilution rate, pavement porosity and method of application.

Precautions: Both surface and ambient temperature shall be a minimum of 50°F. Temperature shall not drop below 50°F in a 24 hour period following application. Keep Out Of Reach Of Children. Do not store unopened containers in freezing temperatures.

6. AVAILABILITY & COST

Availability: Petro Seal is supported by a national network of SealMaster facilities along with a national network of professional applicators.

Cost: Cost information can be obtained from a local applicator. Contact SealMaster for the name(s) of the applicators in your area.

7. WARRANTY

SealMaster warrants that Petro Seal meets the chemical composition and performance requirements set forth in section 4. Liability to the buyer or user of this product is limited to the replacement value of the product only.

Chemical & Physical Analysis

Classification	Blended Latex Emulsion
Non-Volatiles (%)	27% min.
Ash (Non-Volatiles %)	< .5%
Specific Gravity	1.04
Flexibility	No Cracking or Flaking
Resistance to Impact	No Chipping, Flaking, or Cracking
Wet Film Continuity	Smooth, Non Granular

Petro Seal Oil Spot Primer

9. TECHNICAL SERVICES

Manufacturer: Complete product specifications, material safety data sheets, and technical assistance is available from SealMaster.

Professional Applicators: Your local applicator is available to provide on-site inspections and recommendations to meet your specific needs.

10. FILING SYSTEMS

- SealMaster Online Specifications at www.sealmaster.net
- Complete SealMaster Product and Equipment Catalog Available
- Sweet's Catalog
- Sweet's CD
- Sweet's Online
- Sweet's Directory

The statements made on this specification sheet are believed to be true and accurate and are intended to provide a guide for approved application practices. As workmanship, weather, construction, condition of pavement, tools utilized, and other variables affecting results are all beyond our control, the manufacturer warrants only that the material conforms to product specifications and any liability to the buyer or user of this product is limited to the replacement value of the product only. The manufacturer expressly disclaims any implied warranties of merchantability or fitness for a particular purpose. Warranty is void on multi-coat applications if material made by other manufacturers is used with this product.

Form No.: SMT-220
Revised: 7/04
Supersedes: SMT-15 (4/99)

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Sandusky, OH 44870

Phone: 1-800-326-1994
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www.sealmaster.net

SealMaster®

Pavement Products & Equipment

1. PRODUCT NAME

SealMaster Coal Tar
Concentrate Pavement
Sealer

2. MANUFACTURER

SealMaster has a nationwide network of manufacturing and distribution facilities.

Phone: 800-395-7325
www.sealmaster.net

3. PRODUCT DESCRIPTION & BENEFITS

SealMaster Coal Tar Concentrate Pavement Sealer is a clay-stabilized, fuel-resistant coal tar emulsion pavement sealer designed to protect and beautify asphalt pavement. Coal Tar Concentrate is formulated to be job-mixed with water and aggregate.

Basic Uses: SealMaster Coal Tar Concentrate is designed to beautify and protect asphalt pavement surfaces including parking lots, airports, driveways, shopping malls, roadways, and more.

Composition: SealMaster Coal Tar Concentrate is a clay-stabilized, fuel-resistant coal tar emulsion pavement sealer fortified with special surfactants to promote superior adhesion and durability. Select aggregate is job-mixed to produce a slip-resistant coating.

Sizes: SealMaster Coal Tar Concentrate is available in 4,000 gallon bulk tankers, 55-gallon drums, and 5-gallon pails.

Color: SealMaster Coal Tar Concentrate dries to a deep, rich black color.

Limitations: SealMaster Coal Tar Concentrate shall not be applied when temperature is expected to drop below 50°F at any time within a 24 hour period after application.

4. TECHNICAL DATA

SealMaster Coal Tar Concentrate meets the requirements of ASTM D 5727, RP 355e, ASTM D 490, ASTM D 3320-74T, FAA P627, FAA P628, and

FAAP631 specifications for coal tar pitch emulsion (CTPE) pavement sealer.

Environmental Considerations: SealMaster Coal Tar Concentrate does not contain asbestos. Coal Tar Concentrate is an environmentally friendly water based pavement sealer containing less than 150 grams per liter volatile organic content (VOC).

Physical/Chemical Properties: SealMaster Coal Tar Concentrate is a premium quality pavement sealer that meets the following material requirements when tested in accordance with ASTM D 140, ASTM D 466, ASTM D 490, ASTM B117, ASTM D 529, ASTM D 2939, and ASTM D244 procedures. (see chart below)

5. INSTALLATION

Surface must be clean and free from all loose material and dirt. Pavement surface repairs should be made with a suitable hot or cold asphalt mix. Cracks should be filled with SealMaster hot pour or cold applied crack fillers. Treat all grease, oil, and gasoline spots or stains with SealMaster Petro Seal™ or Prep Seal™.

Methods: SealMaster Coal Tar Concentrate shall be applied by either pressurized spray application equipment or self-propelled squeegee equipment. Pressurized spray equipment shall be capable of spraying pavement sealer with sand added. Equipment shall have continuous agitation or mixing capabilities to maintain homogeneous consistency of pavement sealer mixture throughout the application process. Self-propelled squeegee equipment shall have at least 2 squeegee or brush devices (one behind the other) to assure adequate distribution and penetration of sealer into bituminous pavement. Hand squeegees and brushes shall be acceptable in areas where practicality prohibits the use of mechanized equipment.

TEST	SPECIFICATIONS	RESULT
Material	Material shall be homogenous and show no separation or coagulation that cannot be overcome by moderate stirring.	PASSES
Chem. & Physical Analysis		
- Non Volatiles %	47-53%	PASSES
- Ash Non Volatiles %	30 - 40	PASSES
- Solubility of Non Volatiles in CS ₂ %	20 Min.	PASSES
- Specific Gravity 25°C	1.20 Minimum	PASSES
Drying Time	8 Hr. Max.	PASSES
Adhesion & Resistance to Water	No Penetration or Loss of Adhesion	PASSES
Resistance to Heat	No Blistering or Sagging	PASSES
Flexibility	No Cracking or Flaking	PASSES
Resistance to Impact	No Chipping, Flaking or Cracking	PASSES
Resistance to Volatilization	10% Loss in Weight Max.	PASSES
Wet Film Continuity	Smooth, Nongranular Free from Coarse Particles	PASSES
Resistance to Kerosene	No loss of adhesion or penetration	PASSES
P-625 Fuel Resistance Test	Evaluation of Fuel Resistance	PASSES

SealMaster® Coal Tar Concentrate Pavement Sealer

Mixing Procedures:

- For optimum results, SealMaster Coal Tar Concentrate Pavement Sealer shall be mixed in accordance with the following mix design (based on 100 gallons for ease of calculation):

Coal Tar Concentrate.....100 gals.
Water.....30-40 gals.
Sealer V.M. Polymer
Additive.....1-2 gals.
Sand*.....300-500 lbs.
*(40-70 mesh AFS rating)

IMPORTANT: The above mix design is a typical recommendation. Alternative mix designs may be substituted to account for local pavement conditions and use of other pavement sealer additives. However, in all cases sand shall be used in the mix design.

NOTE: Sealer V.M. is manufactured by ThorWorks and is available from your local SealMaster facility.

Application: For optimum performance and durability apply two coats of properly mixed SealMaster Coal Tar. A third coat of mixed Coal Tar Sealer may be applied to high traffic areas such as entrances, exits, and drive lanes.

Application Rate of Mixed Coal Tar Sealer: Apply properly mixed Coal Tar Sealer (Coal Tar Concentrate, Water, Sand, Additive) at a rate of .11 to .13 gallon per square yard (70-82 square feet per gallon) per coat.

Estimating Material Requirements: To estimate gallons of SealMaster Coal Tar Concentrate required to cover a specific area use the following coverage rate:

- One gallon of SealMaster Coal Tar Concentrate will cover approximately 100-120 square feet (11.1 to 13.3 square yards) per coat when properly mixed and applied.

Note: Coverage rates may vary due to pavement age and porosity.

Precautions: Both surface and ambient temperature shall be a minimum of 50°F. Temperature shall

not drop below 50°F in a 24 hour period following application. New asphalt surfaces should be allowed to cure a minimum of four weeks under ideal weather conditions (70°F) before applying Coal Tar Concentrate. Keep Out Of Reach Of Children. Do not store unopened drums or pails in freezing temperatures.

6. AVAILABILITY & COST

Availability: SealMaster Coal Tar Concentrate is supported by a nationwide network of SealMaster manufacturing facilities along with a national network of professional applicators.

Cost: Cost information can be obtained from a local SealMaster Coal Tar Concentrate applicator. Contact SealMaster for the Coal Tar Concentrate representative in your area.

7. WARRANTY

SealMaster warrants that SealMaster Coal Tar Concentrate meets the chemical composition and performance requirements set forth in section 4. Liability to the buyer or user of this product is limited to the replacement value of the product only.

8. MAINTENANCE

Periodic cleaning of parking lot surface will ensure optimum product service life.

9. TECHNICAL SERVICES

Manufacturer: Complete product specifications, material safety data sheets, and technical assistance is available from SealMaster.

Professional Applicators: Your local SealMaster Coal Tar Concentrate applicator is available to provide on-site inspections and recommendations to meet your specific needs.

10. FILING SYSTEMS

- Sweet's Catalog
- Sweet's CD
- Sweet's Online
- Sweet's Directory
- SealMaster Online Specification at www.sealmaster.net
- Complete SealMaster Product and Equipment Catalog Available

The statements made on this specification sheet are believed to be true and accurate and are intended to provide a guide for approved application practices. As workmanship, weather, construction, condition of pavement, tools utilized, and other variables affecting results are all beyond our control, the manufacturer warrants only that the material conforms to product specifications and any liability to the buyer or user of this product is limited to the replacement value of the product only. The manufacturer expressly disclaims any implied warranties of merchantability or fitness for a particular purpose. Warranty is void on multi-coat applications if material made by other manufacturers is used with this product.

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