

POLYMER-MODIFIED MASTERSEAL

Asphalt Based Pavement Sealer

SMT-106

REVISED 09/27/19

PRODUCT DESCRIPTION

POLYMER-MODIFIED MASTERSEAL (PMM) is an environmentally friendly mineral filled asphalt emulsion pavement sealer blended with polymers and special surfactants for superior adhesion, flexibility, and durability. Polymer-Modified MasterSeal is a higher solids, faster drying pavement sealer designed to protect and beautify asphalt pavement. Polymer-Modified MasterSeal is formulated to be job-mixed with aggregate. Polymer-Modified MasterSeal meets ASTM D8099/D8099M-17 Standard Specification for Asphalt Emulsion Pavement Sealer. PMM also meets FAA Item P-623 specification for Emulsified Asphalt Spray Sealcoat.

RECOMMENDED USES

Polymer-Modified MasterSeal is ideal for all types of pavement surfaces including parking lots, shopping malls, airports, driveways, roadways and more.

ESTIMATING MATERIAL REQUIREMENTS

One gallon of Polymer-Modified MasterSeal will cover approximately 85-95 square feet (9.4 to 10.5 square yards) per coat when properly mixed and applied.

APPLICATION RATE OF MIXED MATERIALS

Apply properly mixed PMM (PMM and sand) and at a rate of 70-82 square feet (7.77 to 9.11 square yards) per gallon. Application rates may vary due to pavement porosity and method of application.

PERFORMANCE CHARACTERISTICS

TABLE I - PHYSICAL PROPERTIES OF PMM

ASTM	TEST DESCRIPTION	RESULT
D5	Penetration of Bituminous Materials-Base Asphalt	12-45 Pen
D6937	Density of Emulsified Asphalt	1,000 -1300 g/l
D6930	Settlement and Storage Stability of Emulsified Asphalts	20% max./24 hr.
D113	Ductility of Bituminous Materials-Base Asphalt	5-15 cm
Std. %	Percent Polymer Solids to Asphalt by wt.	2% min.
E70	PH of Aqueous Solutions with Glass Electrodes	6-10 PH
D6378	Vapor Pressure (VPX), mm Hg @ 25° C (77° F)	22-26 mm Hg
D36	Softening Point of Emulsion Residue (Ring and Ball Apparatus)	> 200° F
D93	Flash Point of Liquid Emulsion	> 450° F
D562	Viscosity using a Stormer-Type Viscometer	60-110 KU
D4060	Abrasion Resistance- Taber Abraser Dry Method	< 1% Loss
D522	Mandrel Bend Test of Attached Coatings	No Cracking
D870	Water Resistance of Coatings using Water Immersion	No Delamination
D6904	Resistance to Wind-Driven Rain	No Delamination

TABLE I - CONT.

ASTM	TEST DESCRIPTION	RESULT
D4585	Water Resistance of Coatings Using Controlled Condensation	No Delamination
D3910-6.4	Wet Track Abrasion Test	< 15 g/ft ² Loss
D1735	Water Resistance of Coatings Using Water Fog Apparatus	No Delamination
D2247	Water Resistance of Coatings in 100% Relative Humidity	No Delamination
D4541	Adhesion Strength over Asphalt Pavement	> 200 PSI
D2939-5	Uniformity of Emulsified Bituminous Coatings	PASS
D2939-7	Weight per Gallon	9-11 lbs./gal
D2939-8	Residue by Evaporation, %	40-60 %
D2939-13	Drying Time- 50% humidity, 73.4 ± 3.6°F	2-6 Hrs.
D2939-26	Resistance to Impact- No Chipping, Cracking or Delamination	PASS
D2939-5	Uniformity of Emulsified Bituminous Coatings	PASS
D2939-7	Weight per Gallon	9-11 lbs./gal
D2939-10	Ash Content of Residue, %	40-60%
D2939-14	Resistance to Heat- No Blistering, sagging or slipping	PASS
D2939-15	Resistance to water- No softening, delamination or re-emulsification	PASS
D2939-16	Flexibility- No Cracking or Delamination	PASS
D2939-22	Wet Film Continuity	PASS
D2939-25	Resistance to Kerosine (Fuel Resistance)	PASS
D2939-26	Resistance to Impact- No Chipping, Cracking or Delamination	PASS
D2939-27	Resistance to Impact After Accelerated Weathering	PASS
D95	Water Content, %	40-60%
D2172	Asphalt Content by Weight, %	Min. 16%
D4799	QUV UV Aging- 1,000 Hours	No Color Fade
D3359	Measuring Adhesion by Tape- No More than a Trace of Peeling	PASS
Volatile Organic Compounds	Determination of Volatile Organic Compounds (VOC) in various Coatings	< 10 g/l
PAH Content (Percentage)	Polycyclic Aromatic Hydrocarbon Content (Percentage)	Less than one-tenth of 1% (< .10%)

SURFACE PREPARATIONS

Surface must be clean and free from loose material and dirt. Cracks should be filled with SealMaster Cold Pour or Hot-Applied Crack Filler. Oil stains should be cleaned and primed with SealMaster Oil Spot Primer.

MIXING PROCEDURES

Mix PMM in accordance with the following mix design (based on 100 gallons of PMM for ease of calculation):
 PMM..... 100 gallons
 Sand (40-70 mesh).....200-400 lbs.

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APPLICATION EQUIPMENT

Properly mixed PMM shall be applied by mechanical squeegee/brush equipment or spray equipment capable of spraying coatings with sand. Equipment shall have continuous agitation or mixing capabilities to maintain homogenous consistency of mixed material throughout the application process. Truck mount or self-propelled squeegee/brush equipment shall have at least 2 squeegee or brush devices (one behind the other) to assure adequate distribution and penetration of mixed PMM into bituminous pavement. Hand squeegees and brushes and brushes shall be acceptable in areas where practicality prohibits the use of mechanized equipment.

APPLICATION PROCEDURES

For optimum performance and durability apply a minimum of two coats of properly mixed PMM. A third coat of mixed PMM may be applied to high traffic areas such as entrances, exits, and drive lanes for added durability. Allow each coat to dry thoroughly before applying successive coats. Allow final coat of PMM to dry for 24 hours prior to opening to vehicle traffic.

APPLICATION CONDITIONS

Mixed PMM shall not be applied when temperature is expected to drop below 50°F during application and for a period of at least 24 hours after application.

LINE STRIPING AND TRAFFIC MARKINGS

Use SealMaster 100% Acrylic Traffic paint for line striping and traffic markings.

CAUTIONS

Both surface and ambient temperature shall be a minimum of 50°F and rising during PMM application. Do not apply if temperature is expected to drop below 50°F within a 24 hour period after PMM application.

PACKAGING AND AVAILABILITY

PMM is available in 5-gallon pails, 55-gallon drums and bulk tanker load quantities. PMM is supported by a national network of SealMaster manufacturing facilities along with a national network of qualified applicators.

WARRANTY AND DISCLAIMER

The statements made on this technical data 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.



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