SECTION 718

PRESERVATIVE SEAL FOR ASPHALT CONCRETE

718.1 GENERAL

Asphalt Concrete preservative seal shall be one of the following types or equal, with typical application rates.

TYPE A - Asphalt rejuvenating agent shall be an emulsion composed of a petroleum resin oil base uniformly emulsified with water. Each supplier must submit a certified statement from the asphalt rejuvenator manufacturer showing that the asphalt rejuvenating emulsion conforms to the required physical and chemical requirements. They also must provide documentation of tests that determine the acceptable range of application of the product. Typical application rates are .07 to .18 gallons per square yard.

TYPE B - Petroleum Hydrocarbon emulsion. Applied at .05 to .20 gallons per square yard, diluted.

TYPE C - Tire modified surface sealer (TRMSS) or equal not diluted, and applied at a rate of .10 to .20 gallons per square yard.

TYPE D - Acrylic polymer, modified emulsion. Diluted to the manufacture's recommendation and applied at a rate of .08 to .20 gallons per square yard.

718.2 TEST METHODS AND REQUIREMENTS

Preservative seal for asphalt concrete material, shall meet type A, B, or C on Table 718-1 by certification from the manufacturer.

All tests shall be performed by AMRL accredited laboratory, accredited in the specified test being performed.

TABLE 718-1

PRESERVATIVE SEAL SPECIFICATIONS

Properties * (note 2)		Type-A	Type-B	Type -C	Type-D
Saybolt Viscosity @77°F (sfs)	ASTM D7496-09	45-55 (KU)* (note 1)	15-40	~~15-40~~45-85(KU)*note 1	15-40
Residue by evaporation 138°C	ASTM D6934-08	30-40	.10 Max	~~53~~30 min.	60-65
Sieve test %	ASTM D6933-08	N/A		~~.10 max.~~N/A	0.1
5 day settlement test	ASTM D6930-10		2.0% max	N/A	N/A
Test on residue from evaporation ASTM D6934-08					
Flash point °F(Min)	ASTM D92	450°F	450°F	450°F	385°F
Softening point	ASTM D36M-09	130°F min	N/A	~~130~~140°F min.	N/A
Accelerated weathering test	ASTM D4799-03	Report * (note 3)	N/A	Pass-Report (note 3)	Plant certification within 6 months
Ductility (@77°F) 100g 5 sec.	ASTM D113-07	N/A	N/A	~~20 min.~~N/A	N/A
Storage stability, test 1 day%	ASTM 6930-10	N/A	N/A	N/A	N/A
Viscosity @ 140°F, cSt	D-445	N/A	1,000-9,500	N/A	210-390

Asphaltenes, % w (max)	D-2006-70	N/A	10.0 Max.	N/A	1.00
Maltene Dist. Ratio	D-2006-70	N/A	0.2-1.4	N/A	0.3-0.6
PC/S Ratio[45] (Min) (Note 4)	D-2006-70	N/A	0.5 Min.	N/A	0.5
Saturated Hydrocarbons,S[5] (note 4)	D-2006-70	N/A	28 Max.	N/A	21-28

Notes:
1. Kreb units (ASTM D562)
2. A full set of tests shall be performed by as specified by the special provisions in the undiluted condition. These tests and any other specified will be performed at the contractor's expense.
3. ASTM G154, 1000 hours ~~The~~ Ultraviolet resistance testing results will be provided at no cost to the engineer.
4. Only residue by evaporation shall be run on diluted samples. Specification limits should be diluted rate times minimum residual value of concentrate.
5. PC/S ratio: $\frac{PC + A_1}{S + A_2}$[5]

- End of Section -