



MS-1 Product Data Sheet

Description and Physical Properties

MS-1 is a medium setting, anionic water-based emulsified asphalt for use primarily in asphalt and aggregate mixtures, but is also used in a wide variety of other applications such as base stabilization and full depth reclamation. It is supplied in bulk.

Physical Properties:

- Boiling Point (F): 212°F
- Specific Gravity (H2O=1): 1.01
- Percent Volatile: 0
- Solubility In Water: Soluble
- Appearance And Odor: Brown Liquid, Faint Petroleum Odor

Recommended Use

MS-1 can be mixed with aggregate cold with a portable pugmill at the job site or in-place on the roadway, or warm at a central plant. It may be placed with a paver or worked onto the pavement with a blade or reclaimer.

Specifications Conforms to ASTM D977 Table 1 Specifications:

Property	Test Procedure	Min	Max
Viscosity, Saybolt Furol, 77°F, SFS	ASTM D7496	20	100
Sieve test, %	ASTM D6933	–	0.1
Storage stability, 1 day, % ^A	ASTM D6930	–	1
Coating ability and water resistance:	ASTM D244		
Coating, dry aggregate			Good
Coating, after spraying			Fair
Coating, wet aggregate			Fair
Coating, after spraying			Fair
Distillation test:	ASTM D6997		
Residue by distillation, % by wt.		55	–
Tests on residue from distillation:			
Penetration, 77°F, 100 g, 5 sec.	ASTM D5	100	200
Ductility, 77°F, 5 cm/min., cm	ASTM D113	40	–
Solubility in trichloroethylene or n-propyl bromide, %	ASTM D2042/D7553	97.5	–

^AThis test requirement on representative samples is waived if successful application of the material has been achieved in the field.

Storage and Handling

The water-based emulsion should not be exposed to overheating. The emulsion is a chemically stabilized system, so care should be taken not to upset the chemical balance with contamination by chemicals, over-exposure to air, or adverse mechanical or thermal conditions. Before being filled, tanks and trucks should be examined for possible contaminants.

Recommended use and storage temperatures are given in the table.

Recommended Temperatures	Min	Max
Storage	50°F	180°F
Application	110°F	160°F

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