

CSS-1 Product Data Sheet



Description and Physical Properties

CSS-1 is a cationic slow setting asphalt emulsion designed for use as a tack coat, base stabilization, fog sealing, dust control and specialty applications.

Physical Properties:

- C.A.S. Number: 8052-42-4
- 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
- Flammability: Non-flammable in water-based state

Recommended Use

CSS-1 emulsions are used for a variety of purposes. Slow setting emulsions are the most stable of emulsions, and generally can be diluted with water and mixed with mineral fillers and aggregates. For all uses, the air and pavement temperatures at construction should be sufficiently high to allow the emulsion to fully cure. TxDOT states that no asphalt binders should be applied during rain or imminent threat of rain.

Specifications Conforms to Texas Department of Transportation Specifications-Item 300.2:

Property	Test Procedure	Min	Max
Viscosity, Saybolt Furol, 77°F, sec	T72	20	100
Sieve test, %	T59	-	0.1
Cement mixing, %	T59	-	2.0
Storage stability, 1 day, %	T59	-	1
Particle charge	T59	Positive	
Distillation test:	T59		
Residue by distillation, % by wt.		60	-
Oil distillate, % by volume of emulsion		-	0.5
Tests on residue from distillation:			
Penetration, 77°F, 100 g, 5 sec.	T49	120	160
Solubility in trichloroethylene, %	T44	97.5	-
Ductility, 77°F, 5 cm/min., cm	T51	100	-

Storage and Handling

The water-based emulsion should not be exposed to freezing temperatures or overheating. The cationic 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	140°F
Application	50°F	130°F

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