

Materials Specification for: **Emulsified Asphalt – Polymer Modified**

Properties	ASTM	Specifications				
		CQS-1HP ²	CRS-2P	HF150P	HF250P	HP-200P
Test on Emulsion						
Viscosity, SF, at 25°C	D88	20-100	--	--	--	--
Viscosity, SF, at 50°C	D88	--	100-400	35-150	35-150	100-250
Residue by distillation, 205°C % by Mass	D6997 ¹	62 min	65 min	62 min	62 min	65 min
Demulsibility, %, 50 ml 0.1N CaCl ₂	D6936	--	--	75 min	75 min	--
Demulsibility, %, 35 ml DOSS 0.8%	D6936	--	60 min	--	--	--
Oil Portion of Distillate, % by Volume	D6997 ¹	--	3 max ³	3 max ³	3 max ³	--
Sieve Test, % (850 um)	D6933	0.1 max	0.1 max	0.1 max	0.1 max	0.1 max
Storage Stability, % (24h)	D6930	1 max	1.5 max	1.5 max	1.5 max	--
Settlement, % (5 days)	D6930	--	--	--	--	3 max
Particle Charge	D7402	(+)	(+)	--	--	--
Tests on Residue by Distillation (15 min. at 205°C)						
Penetration at 25°C, dmm	D5	40 -90	100-250	150-250	250-500	75-200
Solubility, % by Mass ⁽¹⁾	D2042	--	97.5 min	97.5 min	97.5 min	97.5 min
Float Test at 60°C, s	D139	--	--	1200 min	1200 min	--
Elastic Recovery, at 10°C, %	D6084	50 min	55 min	50 min	55 min	55 min
Softening Point, °C	D36	57 min	--	--	--	--
Force Ductility, 5 cm/min. Pull rate at 4°C, kg	AASHTO T300	--	--	--	0.25	--

- (1) Test according to CAEP polymer modified procedure as in MIT MEB-B316.
- (2) CQS-1HP polymer modifier shall be a minimum of 3% polymer solids by mass of asphalt cement residue in the emulsion. The Emulsion shall be homogenous after mixing. To facilitate sampling and testing, the emulsion shall be stable for 14 days after delivery to the job site. The polymer material shall be milled or blended into the asphalt cement or blended into the emulsifier solution prior to the emulsification process.
- (3) Percentage of distillation reduced to three (3) percent to meet Environment and Climate Change Canada – Code of Practice for the Reduction of Volatile Organic Compound (VOC) Emissions from the Use of Cutback and Emulsified Asphalt – Feb, 2017
- (4) Temperature to arrive at site shall be between 55-65°C