



5301 Bannock Street • Denver, CO 80216 • (303) 296-8575

**PRODUCT SPECIFICATION**

**CRS-2P  
CATIONIC RAPID SETTING EMULSIFIED ASPHALT  
POLYMER MODIFIED**

CRS-2P shall be an emulsified blend of straight-run vacuum tower bottoms asphalt, solvent refined heavy naphthenic extract, styrene/butadiene/styrene (SBS) block copolymer, styrene/butadiene copolymer (SBR) dispersion, water, and emulsifiers. The emulsified blend shall contain a minimum of three (3.0) percent copolymer by weight of asphalt cement. The emulsion shall be smooth and homogeneous throughout, pumpable and suitable for application through a distributor truck. The emulsified asphalt shall conform to the following requirements:

	<b>Requirements</b>		<b>Test Method</b>		
	<b><u>Min</u></b>	<b><u>Max</u></b>	<b><u>AASHTO</u></b>	<b><u>ASTM</u></b>	<b><u>CDOT</u></b>
<b>Tests on Emulsion:</b>					
Viscosity, Saybolt Furol, 50°C, s	<b>80</b>	<b>450</b>	T-59	D244	
Storage stability test, 24-h, % <sup>A</sup>		<b>1</b>	T-59	D6930	
Demulsibility, 35ml, 0.8% dioctyl sodium sulfosuccinate, %	<b>40</b>		T-59	D6936	
Particle charge test	<b>positive</b>		T-59	D244	
Sieve test, % <sup>A</sup>		<b>0.1</b>	T-59	D6933	
Distillation <sup>B</sup> :					
Oil distillate, by volume of emulsion, %		<b>0.5</b>	T-59	D6997	
Residue, %	<b>70</b>		T-59	D6997	CP-L2212*
<b>Tests on Residue from 325°F hot plate evaporation test (Colorado DOT CP-L2212*)<sup>B</sup>:</b>					
Penetration, 25°C, 100g, 5 sec	<b>60</b>	<b>110</b>	T-49	D5	
Ductility, 25°C, 5 cm/min, cm	<b>100</b>		T-51	D113	
Ductility, 4°C, 5 cm/min, cm	<b>45</b>		T-51	D113	
Toughness, in-lb	<b>110</b>		D5801	CP-L2210*	
Tenacity, in-lb	<b>75</b>		D5801	CP-L2210*	
Elastic recovery, 25°C, 20cm, 5m hold/1h recovery, %	<b>75</b>		T301	D6084 (B)	CP-L2211*
Softening Point, Ring & Ball, °C	<b>57</b>		T-53	D36	
Solubility in trichloroethylene <sup>C</sup> , %	<b>97.5</b>		T-44	D2042	

<sup>A</sup> This test requirement on representative samples is waived if successful application of the material has been achieved in the field.

<sup>B</sup> Distillation to 260°C (T-59 §11 to 15) shall be the reference method for percent distillate and percent residue. Residue by hot plate evaporation at 163°C (CP-L2212 modified to a maximum temperature of 325°F) shall be the reference method to obtain material for tests on residue. Residue from distillation shall not be used for tests on residue due to polymer degradation at 260°C. Colorado DOT Procedure CP-L 2212\* modified to a 163°C maximum temperature may be used for acceptance testing of percent residue.

<sup>C</sup> If the solubility of the residue is less than 97.5%, the base asphalt binder for the emulsion shall be tested. The solubility of the base asphalt binder shall be greater than 99 percent.

\* CP-L 2210, CP-L 2211, and CP-L 2212 are Colorado Department of Transportation test procedures.

*Specifications are subject to change without notice.*