



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 copolymers, 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*          |

**Tests on Residue from 325°F hot plate evaporation test (Colorado DOT CP-L2212\*)<sup>B</sup>:**

|  |             |            |       |           |           |
|--|-------------|------------|-------|-----------|-----------|
| Penetration, 25°C, 100g, 5 sec                       | <b>60</b>   | <b>110</b> | T-49  | D5        |           |
| Ductility, 25°C, 5 cm/min, cm                        | <b>125</b>  |            | T-51  | D113      |           |
| Ductility, 4°C, 5 cm/min, cm                         | <b>45</b>   |            | T-51  | D113      |           |
| Toughness, in-lb                                     | <b>150</b>  |            | D5801 | CP-L2210* |           |
| Tenacity, in-lb                                      | <b>110</b>  |            | D5801 | CP-L2210* |           |
| Elastic recovery, 25°C, 20cm, 5m hold/1h recovery, % | <b>80</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.*