Colorado Procedure 50-14

Standard Method of

Calculation of Dust to Asphalt Ratio of Bituminous Mixes

1.   SCOPE

1.1   This method covers the calculation used to determine the dust to asphalt (D/A) ratio of bituminous mixes.

2.   CALCULATIONS

2.1 $DA = (P_{200} - 1) / P_{be}$

Where:
DA = Dust to Asphalt Ratio,
P_{20} = Aggregate content passing the 0.075-mm sieve, the percent by mass of aggregate,
P_{be} = Effective asphalt content, percent by total mass of mixture.

2.2

$$Pbe = -\left(Ps \times Gb\right) \times \left(\frac{Gse - Gsb}{Gse \times Gsb} \right) + Pb$$

Where:
P_{be} = Effective asphalt content, percent by total mass of mixture,
P_s = Aggregate content, percent by total mass of mixture,
G_b = Specific gravity of asphalt,
G_{se} = Effective specific gravity of aggregate,
G_{sb} = Bulk specific gravity of aggregate,
P_b = Asphalt Content, percent by total mass of mixture.

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