

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

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

Where:

DA = Dust to Asphalt Ratio,

P₂₀₀ = 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

$$P_{be} = - (P_s \times G_b) \times \left(\frac{G_{se} - G_{sb}}{G_{se} \times G_{sb}} \right) + P_b$$

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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