

Mn/DOT Blending Chart

Procedure to determine allowable % RAP to reach target PG Grade with virgin asphalt binder used as softening agent.

1. Determine PG Grade (not verify) virgin asphalt binder to be used for softening agent. One Failing and One Passing test must be conducted for RTFO DSR , PAV DSR and BBR.
2. RAP asphalt binder is recovered and PG graded. See 1. Recovery preferably done by rotovap method. Virgin binder PG temp are plotted at 0%RAP and RAP PG temp is plotted as 100% RAP.
3. Draw line using RAP & RTFO PG grade temp for high temp line. Draw line using RAP & Virgin PAV BBR PG grade temp for low temp line. Draw a line using RAP & Virgin PAV DSR PG grade temp for intermediate temp line.
4. Estimated allowable % RAP is determined where the high, intermediate and low temp blending chart lines cross target PG high and low values. For example using 58-28 as target PG. Lines are drawn at 58 & -28 to determine max RAP allowed. The example shows about 20% RAP used with PG 52-34 would give a PG 58-28

Example of Blending Chart based on PG Temperatures of RAP & Virgin Asphalt Binder

