



TUFFTREK 4007

Renewable Oil Technology

TUFFTREK 4007 renewable oil technology from Bakelite Synthetics helps restore the viscoelastic properties of aged asphalt binder.

TUFFTREK 4007 benefits include:

- Cost-effective technology
- Improved DCT and IDEAL-CT cracking resistance in lab and field testing
- Allowed increased amounts of RAP and RAS to be used in asphalt pavements
- Restorative improvements to asphalt binder durability characteristics (as measured by ΔT_c and Glover-Rowe)
- Add in-line for ease of incorporation

- Biobased, renewable
- Low viscosity (65 cP at 25°C)
- High flash point (Open Cup 468°F)

TUFFTREK 4007 is easy to handle. It can be blended at the terminal or added at the hot mix plant in-line with the asphalt binder. Product is available throughout North America in totes, tanker truck or rail cars.

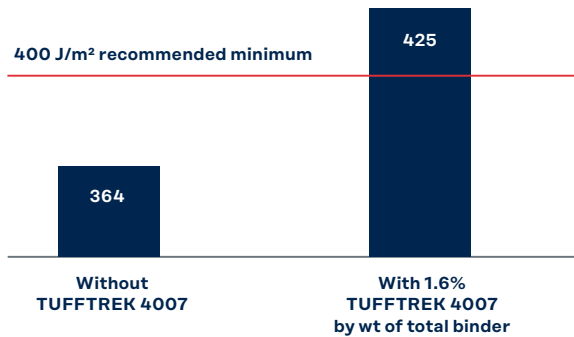
Testing

Test results on a blend of 50% aged asphalt binder and 50% PG 58-28 demonstrate TUFFTREK 4007's softening effectiveness and restorative improvements to binder durability and cracking characteristics, even after 40hrs of PAV aging.

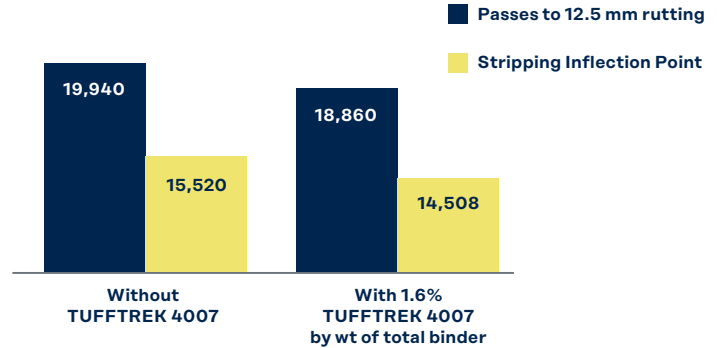
	PG 58-28	50% PG 58-28 50% RAP	50% PG 58-28 50% RAP
% TUFFTREK 4007 Added	0%	0%	2%
High PG	59.9	77.4	62.9
Low PG	-28.7	-23.0	-29.7
40 hr PAV ΔT_c	-1.1	-3.8	-1.4
40 hr PAV Glover-Rowe	56	539	64

Performance tests conducted on a production mix from a Nebraska contractor containing 50% RAP demonstrate TUFFTREK 4007's positive effects on low temperature and intermediate temperature cracking with minimal loss in rutting performance.

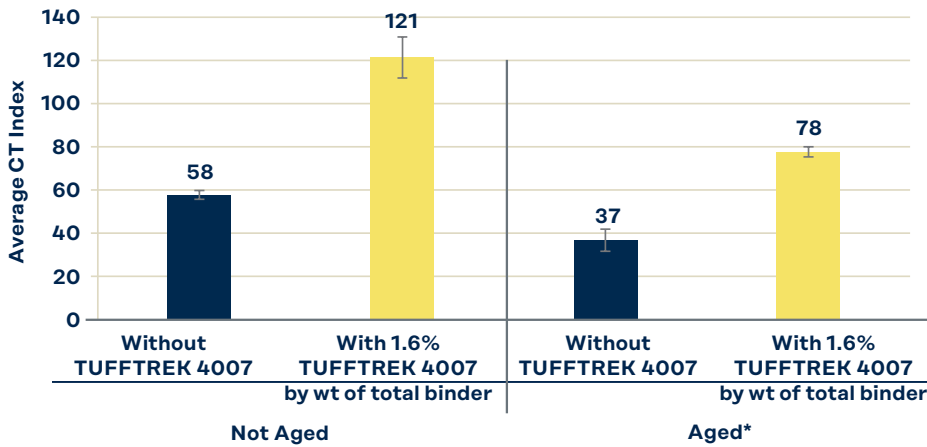
DCT Fracture Energy -18°C



Hamburg Wheel Tracking 45°C



IDEAL-CT (25°C)



*Aged test samples were prepared from field mix reheated in a 135°C oven for 2 hours and then conditioned in a loose mix state for 6 hours.



Next Generation Synthetics



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