Pavement Layer Tacking and Bonding

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Bond
Issues with Bond
Core Separation (New Construction)
NCAT Test Track

Bonding of Asphalt Pavement Layers
Conclusions from NCAT

Bottom Line for Asphalt Layer Bonding

- 100 psi minimum bond strength
- PG67-22
  - 0.03 to 0.07 gal/yd² on new pavement
  - 0.05 to 0.09 gal/yd² on milled surface
- NTSS-1HM (undiluted bar rates)
  - 0.04 to 0.08 gal/yd² on new pavement
  - 0.06 to 0.10 gal/yd² on milled surface
- CQS-1H and CRS-2 (undiluted bar rates)
  - 0.05 to 0.10 gal/yd² on all surfaces
- High end for higher RAP/RAS mixes!
Tack
Tack

Road and Bridge Specifications, Sec. 310.03

Undiluted asphalt shall be applied at the rate of 0.05 to 0.10 gallons per square yard. Diluted asphalt shall be applied at the rate of 0.10 to 0.15 gallons per square yard.
Tack Application Rate
Tack Application Rate
Tack Application Rate
Tack Application Rate
Tack Application Rate
Tack Application Rate
Tack Application Rate
Tracking of Tack
Tack and Bond Strength

Issues to be Addressed

• Specification of correct tack material
• Storage and handling of tack
• Measurement and verification of application rates
• Verification of bond strength
• Tracking of tack
The first meeting of the Virginia Tack & Bond Strength Task Force was held on Friday, February 6, 2015.

Task Force Lead: Rob Crandol

Initial Topics:

- Defining the scope, schedule and expectations of the task force
- Information about best practices & specs currently used around the country
- Establishing and agreeing on clear ‘problem statements’
- Planning future work