

TACK COAT

More Important than you think

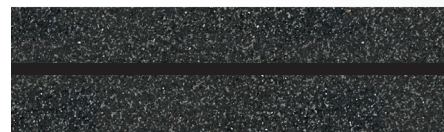
CRITICAL TO PAVEMENT SUCCESS

Tack Coat, more accurately called Bond Coat, ensures proper bonding between old and new layers of asphalt. When properly bonded, the cross section of a road will act as a single unit, ensuring vital structural integrity and helping prevent many of the major problems associated with road failure.

WHEN APPLIED CORRECTLY, BOND COAT:

- ▶ Helps create a monolithic structure
- ▶ Significantly reduces delamination
- ▶ Improves fatigue life
- ▶ Reduces rutting and shoving
- ▶ Facilitates better compaction

BONDED - WITH TACK COAT



UNBONDED - 23% MORE DEFLECTION



MORE BOND COAT, BETTER ROADS

LESSONS FROM THE TEST TRACK

In 2013, NCAT had a premature failure on the test track. Forensics revealed that insufficient bond coat was a significant factor, even though the rate and quality of bond coat was considered ideal. Laboratory testing showed that twice the previously recommended amount was needed to optimize bond strength.



"The research shows that bond coat is more important than previously thought. We often need to use more of it than is common practice, and we need to be much more careful with how it is applied."

- Dr. Buzz Powell, PE

NCAT ASSISTANT DIRECTOR
& TEST TRACK MANAGER



SHOVING AND DELAMINATION
CAN OCCUR WHEN BOND COAT
IS NOT APPLIED PROPERLY OR
WHEN NOT ENOUGH IS USED



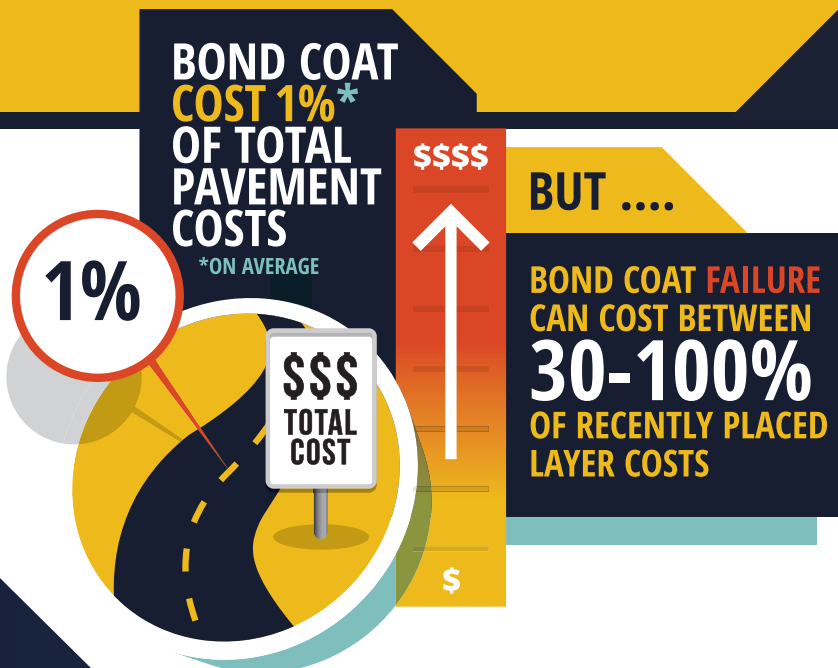
PENNIES THAT SAVE YOU MILLIONS

PREVENTING THE HIGH COST OF FAILURE

When it's not right, your road is at risk. The estimated cost of bond failure in top lift can be anywhere from thirty to one-hundred percent of your recently placed layer costs, plus removal costs.

SPEC IT RIGHT. APPLY IT RIGHT. DON'T LEAVE IT TO CHANCE.

WHAT'S YOUR ROLE IN PREVENTING ROAD FAILURE?



CONTRACTOR

PROPER APPLICATION IS CRUCIAL.

- ▶ **BID APPROPRIATELY:** Ensure your bid accounts for the proper amount of bond coat.
- ▶ **APPLY:** Bond coat should be applied to all surfaces, including milled surfaces. Spray proper rates uniformly to transverse longitudinal and vertical surfaces. All surfaces. Everytime.
- ▶ **RE-APPLY:** The Asphalt Institute recommends you re-tack when in doubt, and especially after tracking or contamination occurs.
- ▶ **RIGHT EQUIPMENT:** Make sure distributors are clean and that nozzles are correct size and positioned at correct angle. Ensure correct bar height and triple overlapping spray pattern.

AGENCY

INCENTIVIZE & INSPECT TO ENSURE SUCCESS.

- ▶ **SPECIFICATION:** Include bond coat in your specification as a pay item. Research finds that states with bond coat problems tend to treat bond coating as incidental, rather than a separate pay item.
- ▶ **INSPECT:** Require bond coat inspection and inspect every time. Your road depends on it.
- ▶ **ENSURE SUCCESS:** If you're not specing bond coat as a pay item, and inspecting properly, you may be inviting road failure.

SUPPLIER

EMULSION QUALITY MATTERS.

- ▶ **EXCELLENCE:** Stricter standards and new research are improving industry practices. Work closely with contractors and agencies to provide the highest quality emulsions.

Bond it Right.

Your Road Depends on it.