



Structural Integrity between Asphalt Layers

BOND & TACK COATS

Eliminates slippage planes between new and old pavement.

Conventional Bond Coat Emulsions

Clean Bond Coat Emulsions

Polymer-Modified Bond Coat Emulsions

Prime Coat Emulsions



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THE MCA ADVANTAGE

With the MCA Advantage, you get a partner and advisor who will consult with you about designs, specifications, technical services, processes, and material selection. By developing innovative, custom-designed products that offer additional benefits such as peak performance in unique conditions, improved field performance, and greater environmental and health benefits, the MCA Advantage provides significant long-term cost savings, resulting in a lower "total cost of ownership."

CONVENTIONAL BOND COAT EMULSIONS

In order to improve the bond between layers of pavement, a bond coat should be applied. A bond coat is a spray application of asphalt emulsion. It is applied to an existing asphalt or Portland cement concrete surface prior to a new asphalt overlay or patching, eliminating slippage planes and providing a better bond between new and existing pavement layers. A bond coat is a very inexpensive way to ensure that there is structural integrity between pavement layers.

There are many different types of emulsions used in bond coating, both anionic and cationic. Typically, SS-1, SS-1H, CSS-1, or CSS-1H are used as bond coat emulsions. These emulsions are normally diluted with water (1:1) prior to applying in order to reduce their viscosity. This reduced viscosity is ideal for spraying, filling small cracks and voids, and more accurately applying very small quantities of residual asphalt.

CLEAN BOND COAT EMULSIONS

Clean bond coats serve the same function as a regular bond coat application but they have the added benefit of leaving a non-tacky residual binder on the surface. This residual prevents tracking by construction vehicles and the general public and keeps a sufficient amount of bond coat on the base, encouraging proper bonding and shear strength when an overlay is placed on it. This is an excellent choice for busy urban areas as it eliminates the unsightly tracking of asphalt.

POLYMER-MODIFIED BOND COAT EMULSIONS

Applied using conventional methods, polymer-modified bond coats are specifically designed to withstand high stress and shear conditions. Uses include airport pavements, high-traffic roadways, racetracks, concrete pavement overlays, and bridge decks.

PRIME COAT EMULSIONS

A prime coat is a single application of either a specially formulated asphalt emulsion or a low-viscosity asphalt cutback. Their primary functions are to penetrate quickly into the granular surface and bind the material together, to partially waterproof a granular surface in order to prevent water erosion, to provide a temporary riding surface prior to overlay or seal coating, and to provide a bond between the existing surface and the new wearing surface.

The asphalt emulsions used as prime coats typically contain a combination of asphalt and specially engineered agents that aid in penetrating the granular surface while binding the aggregate particles together in order to achieve stabilization.

FEATURES AND BENEFITS

- Prevents de-bonding of HMA layers
- Prevents mat slippage and reduces top-down cracking
- Enables superimposed lifts to act as a monolithic layer, increasing the overall structural capacity of the roadway
- Increases mat density during rolling operations due to decreased slippage/forward movement of the HMA being rolled
- Increases pavement life and decreases life cycle cost
- Small cost versus the benefit



THE RIGHT MIX

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