THE BREWER COMPANY

General Factors Affecting Sealer Wear

For the purposes of this article, concentrate sealers and general factors which affect wear are discussed. Mix designs containing aggregate and additives still fall within the scope of this discussion but their specific affects on wear resistance are not addressed here.

Item number one is to assure that the pavement is thoroughly clean prior to sealing. As with all coatings, sealer needs to have a good mechanical bond to the surface it is applied to.

Dilution is the next stage in the process. Sealer is mixed with water in order to facilitate application. In scientific terms, water is the coating's vehicle. Its job is to keep the coating's binder and reinforcement (tar and clay) evenly dispersed, carry them uniformly over the surface to which the coating is applied (the substrate), and evaporate, leaving an even film of the coating's binder and reinforcement. Water also "wets" or helps establish a mechanical bond to the substrate.

Addition of too much water causes the vehicle to carry too little of the binder and reinforcement over the asphalt surface. The resulting film is inadequately thin, with uneven distribution of tar and clay and results in premature wear.

If too little water is added, the coating cannot adequately flow across the surface and into the voids of an asphalt pavement. This leaves voids between the coating and the substrate. Too little water also means that the areas of the substrate in contact with the coating have not been sufficiently "wetted" and a poor mechanical bond between the coating and substrate exists. Both of these conditions result in premature wear. Inadequate dilution also contributes to much more serious problems. That there is insufficient vehicle to "wet" and flow across the substrate, means that there is also insufficient vehicle to allow the tar and clay to evenly meld together while drying and in the initial stages of curing. At a minimum, the coating dries with uneven color and is soft, even if under applied. At its worst, a condition known as tracking occurs, where the coating remains soft and tacky for a prolonged time.

Following The Brewer Company Application Specification assures that your dilution rate gives you the correct mix design for the job. The dilution rate is listed, for specific traffic conditions, in ranges to allow for weather conditions. Dilution should be in the higher end of the range for hotter summertime temperatures.

The sealer one starts with also has a critical bearing on wear ability. Sealer low in solids is more easily over diluted. Sealer that has a high clay (ash) content, or containing water swelling clay, is significantly less resistant to traffic, especially when wet. Small, evenly divided tar particle size assures a dense film, evenly reinforced by the clay filler. Brewer Cote® is consistently produced at a high solids content with select clay, correctly proportioned and utilizing a colloid mill for optimum tar particle size and distribution. Combined with stringent quality control, this assures you the ability to provide the highest quality work possible.

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