

A common distress type of chip seals is scabbing (loss of aggregate) which is caused by insufficient adhesion between aggregate and binder. Both the physical and chemical properties of the aggregate and binder play important roles on aggregate binder adhesion. This study focuses on evaluating the effects of aggregate surface properties on adhesion performance of chip seals using Accelerated Chip Seal Simulation Device (HSKSC) test procedure. 100/150 penetration neat and modified bitumen were used in experiments as binder. Also, clean, dusty and precoated forms of three different type aggregates were used in HSKSC tests. The results showed that performance of precoated aggregate considerably better in compare to dusty and clean aggregate. In addition modified binder demonstrated better chip retention than the neat binder.