ABSTRACT

Aggregates square measure the principal material in pavement construction. Standard road aggregates in Asian country are natural aggregates obtained by crushing rocks. The physical properties of coarse combination square measure additional important in new generation hydrocarbon mixtures. Combination characteristics like particle size, shape, and texture influence the performance and unstableness of hot combine asphalt pavement. The form of combination particle has important influence on performance of the hydrocarbon pavement. Particle form is delineating as cube like, blade, disk and rod. The strength unstableness necessities of hydrocarbon mixes like stability, flow, voids in mineral combination (VMA), voids full of hydrocarbon (VFB) and air voids square measure extremely rely on the physical properties of combination. Dense hydrocarbon macadam (DBM) mixes were analyzed with completely different proportions (10%, 20%, 30%, 40%, and 50%) of different form of aggregates were studied. Mixes with cube like and rod form aggregates has been showed sensible results on stability. The parameters like air voids and voids in mineral combination will increase with increase in proportion of blade style of aggregates in DBM mixes. The particle index price of coarse combination considerably affected the engineering properties of hot combine asphalt (HMA) combine. The particles from determined however combination packed into a dense configuration and conjointly determined the inner resistance of a combination. Mixes prepared by replacing 20% aggregates shown higher stability values. Cubical particles exhibit interlock and internal friction, and hence results in greater mechanical stability than the blade, rod, and disk shape aggregates. Particle shape parameter values obtained were higher for cubical shape aggregates and lower for blade shape aggregates.

Key Words: coarse aggregate, aggregate shape, hot mix asphalt