



Effect of mixed of Industrial Scraps and Lamp Black Percent on the Mechanical properties of NR70/SBR30 composite

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Abstract : The possibility of using mix of some industrial scraps such as reclaim or cement waste and lamp black as reinforcement in natural rubber/styrene-butadiene rubber (NR70/SBR30), were explored as an alternative filler to prepare batches that it used in fender ship application. Mix of reclaim or cement waste and lamp black used in this paper as additives or fillers to study some of the mechanical properties of NR70/SBR30 blends. Eight different compounds were prepared from SBR30 pphr, NR70pphr and 4 loading level from cement waste (C.W) (0,10,20,30) pphr, reclaim (0,10,20,30) pphr and carbon black (C.B) 50 pphr. The hardness, tensile strength, tear resistance, elongation, elastic modulus, fatigue, and specific gravity have been studied in this research. The results of some of these properties are increasing with the increment of mix of C.B and reclaim loading, such as tear resistance, damping time and resilience, while specific gravity, tensile strength, tear resistance, elastic modulus fatigue, elongation, were decreased with increment mixed of C.B and reclaim loading %. On other hand, in the cement waste loading found that hardness, elastic modulus, wear was increasing with increase loading level, whereas, elongation, tear, tensile, specific gravity, fatigue, resilience, damping time were decreased with increasing loading level.

Keywords: Lamp black, industrial scrap, NR70/SBR30.