International Journal of ChemTech Research
CODEN(USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.9, No.09 pp375-381,2016

Effect Weathering Conditions on the Mechanical Properties of the Sport Surfaces Prepared of Crumb Rubber

Mohammad H. Al Maamori*, MurtadahKateeb

University of Babylon, Hilla, Iraq

Abstract: This research aims to study the effect of weathering conditions(UV ray and heat at 70^0 C) on the mechanical properties for prepared. These sports surfaces were manufactured from the crumb rubber (which considered as pollutant materials for the environments that is available at the state company for rubbers industries and tires industry in Al-Najaf city which considered as a base material in this work and added for him various ratios from acrylic polymer material as binder material. In this research the binder polymeric material has been added in different proportions to the crumb rubber which has particle size 2 mm and through the results found that the tensile strength before aging is 0.467 MPa and after aging with UV is 0.466 MPa and after aging with heat is o.466 MPa and the hardness before aging is 59.6 and after aging with UV is 62 and after aging with heat is 60.3 and the resilience before aging is 52.9 % and after aging with UV is 57 % and after aging with heat is 53.1 % and the friction coefficient before aging is 0.75 and after aging with UV is 0.79 and after aging with heat is 0.88 and the wear resistance before aging is 0.647 % and after aging with UV is 0.635 % and after aging with heat is 0.625 % and compression set before aging is 0.69 % and after aging with UV is 0.72 % and after aging with heat is 0.26 % and the fatigue Resistance before aging is 616 and after aging with UV is 539 and after aging with heat is 561 and the densitybefore aging is 0.99 g/cm^3 and after aging with UV is 0.8197 g/cm^3 and after aging with heat is 0.828 g/cm^3.
Keywords: Weathering Conditions, Mechanical Properties, Sport Surfaces, Crumb Rubber.

Mohammad H. Al Maamori *et al*/International Journal of ChemTech Research, 2016,9(9),pp 375-381.

*****