

Effect of Using Recycled Polyester Geogrid on the behavior of Foundation Soil

Abstract

The intensive development of plastic products (Polyester PET) has negatively influenced the environment due to their resistance to degradation especially in the developed countries. Therefore, it has recently become necessary to consider the significance of recycling of PET for sustainability considerations. It is known that unreinforced soils have less strength and stiffness properties than geosynthetically reinforced soil at poor drainage conditions. The aim of the research is to investigate the effect of recycled PET geogrids on the foundation soil of unpaved roads at different saturation levels by conducting a series of experimental CBR tests and numerical simulations using Abaqus software.