



Geosynthetics and Their Application in Road Engineering

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Abstract: Geosynthetics have been used in construction before fifty years. Because of their advantages, they have been accepted very well, and therefore have found wide application in construction. Geosynthetics for the first time was largely used in 1953 in the Netherlands, where due to catastrophic floods that have caused 150.000ha of land, has began to apply the so-called “Delta project” for the reconstruction of the south western country. By the method of construction and purpose to be used, geosynthetics divided: geotextile, geogrid, geomembrane and geocomposite. Geosynthetics in civil engineering perform many functions, such as: reinforcement, separation, filtration, drainage and fluid barrier. To achieve these functions, geosynthetics must have appropriate properties. For the purpose of soil reinforcement the main properties of geosynthetics are mechanical (tensile strength), for filtration and drainage hydraulic properties. The mentioned properties are considered primary and are essential for the stability and functioning of the construction. Besides the primary conditions, geosynthetics should meet several secondary conditions such as: resistance to wear and penetration, resistance to ultraviolet radiation, extreme temperatures and bacteria.

Key words: *geosynthetics, production of geosynthetics, physical, mechanical and hydraulic properties, test methods, application in Kosovo roads.*

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