IS 16393 : 2015 Geosynthetics - Geotextiles used in subsurface drainage application - Specification

Subsurface drainage geotextiles are permeable fabrics used in civil engineering and construction projects to manage water drainage beneath the surface. They are a type of geosynthetic material specifically designed to facilitate the movement of water while providing separation and stabilization for soil layers.

They also help extend the lifespan of drainage structures by reducing soil erosion and maintaining proper water drainage around infrastructure.

IS 16393 ; 2015 specifies requirements for two classes of geotextiles used in drainage application such as subgrade dewatering, road base drainage and structure drainage. Class 1 geotextiles are for applications where applied stresses are more severe, that is, where a very coarse shape angular aggregate is used. Class 2 geotextiles are suitable for drainage applications which are less severe, that is, smooth graded surfaces having no sharp angular aggregate.

This geotextile product is expected to have strengths across various parameters to effectively ensure the drainage and stability both and should have excellent durability.

To meet this expectation, the standard prescribes the requirements of the type of geotextile (woven or non-woven), roll length and width, grab strength, sewn seam strength, trapezoidal tear strength, CBR puncture strength, burst strength, permittivity, apparent opening size, resistance to installation damage, and Ultraviolet stability at 500 h. The geotextile material shall be marked by attaching the printed labels containing the information like class of geotextile material, batch no, date of manufacture etc.