



PET and Chemical Resistance

SYNTHETEX® manufacturers HYDROTEX®, a concrete formed mattress system, that is solely composed of High Tenacity Polyester, (PET). The specific type of PET yarns we utilize is commonly referred to as HTLE. These yarns have been chemically tested and have zero forever chemicals in their manufacturing process that could potentially leach into ground water. Specifically; HYDROTEX® only sources yarn from certified suppliers resulting in zero PFAS constituents. PFAS is a broader term to describe materials listed as 'Forever Chemicals'. These forever chemicals have known potential for leaching when in contact with other materials that have long half-lives providing environmental concerns. Further to this, the PET sourced by SYNTHETEX® for manufacturing of Hydrotex® and its revetment PET cables meet specific FHWA requirements for Molecular Weight and Carboxyl End Groups. This criterion is designed for continuous exposed conditions to moisture with the intent to limit hydrolysis and promote long term performance.

Furthermore, regarding chemical compatibility; PET also exhibits a wide range of excellent resistance to strong acids, organic acids and various oils.

Considering permanent use in environments underwater where the chemical conditions are unknown; we would require specific chemical analyses to make predictive statements. However; the main concern regarding the quality PET we utilize for HYDROTEX®; is exposure with extremely strong solvents. PET is susceptible to solvents such as high concentrations of Acetone and like materials. Long term exposure and intimate contact to these strong solvents would cause discoloration and degradation in a worst-case scenario. Potential degradation is directly proportional to exposure, and concentration level.

SYNTHETEX® recommends limited exposure to strong solvents especially in neat form to prevent a potential compromise of the performance characteristics. HYDROTEX®; outside of intimate contact and exposure to strong solvents, will perform as a concrete formed mattress system in above ground or under water conditions as we consider these routine applications.