



Designation: D 6693 – 013

Standard Test Method for Determining Tensile Properties of Nonreinforced Polyethylene and Nonreinforced Flexible Polypropylene Geomembranes¹

This standard is issued under the fixed designation D 6693; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This test method covers the determination of the tensile properties of nonreinforced geomembranes in the form of standard dumbbell-shaped test specimens when tested under defined conditions of pretreatment, temperature and machine speed.

1.2 This test method can be used for testing materials thickness between 0.25 mm (0.0210 in) and ~~14~~ 6.3 mm (0.525 in.).

NOTE 1—This test method is not intended to cover precise physical procedures. The constant rate of crosshead movement of this test lacks accuracy from a theoretical standpoint. A wide difference may exist between the rate of crosshead movement and the rate of strain of the specimen indicating that the testing speeds specified may disguise important effects or characteristics of these materials in the plastic state. Further, it is realized that variations in the thicknesses of test specimen, as permitted by this test standard, produce variations in the surface-volume ratios of such specimens, and that these variations may influence the test results. Hence, where directly comparable results are desired, all samples should be of equal thickness. Special additional tests should be used where more precise physical data are needed.

1.3 Test data obtained by this test method is relevant and may be appropriate for use in engineering design with consideration of test conditions as compared to in-service conditions.

1.4 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

¹ This test method is under the jurisdiction of ASTM Committee D35 on Geosynthetics and is the direct responsibility of Subcommittee D35.10 on Geomembranes. Current edition approved ~~July 10, 2001~~; Dec. 1, 2003. Published ~~October~~ January 2004. Originally approved in 2001. Last previous edition approved in 2001 as D 6963-01.