



Designation: D 2990 – 9501

An American National Standard

Standard Test Methods for Tensile, Compressive, and Flexural Creep and Creep- Rupture of Plastics¹

This standard is issued under the fixed designation D 2990; 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.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope*

1.1 These test methods cover the determination of tensile and compressive creep and creep-rupture of plastics under specified environmental conditions (see 3.1.3).

1.2 While these test methods outline the use of three-point loading for measurement of creep in flexure, four-point loading (which is used less frequently) can also be used with the equipment and principles as outlined in Test Methods D 790.

1.3 For measurements of creep-rupture, tension is the preferred stress mode because for some ductile plastics rupture does not occur in flexure or compression.

1.4 Test data obtained by these test methods are relevant and appropriate for use in engineering design.

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

1.6 *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.* A specific warning statement is given in 6.8.2.

NOTE 1—This standard and ISO 899 are similar in content, but are not equivalent.

2. Referenced Documents

2.1 ASTM Standards:

¹ These test methods are under the jurisdiction of ASTM Committee D-20 on Plastics and are the direct responsibility of Subcommittee D20.10 on Mechanical Properties

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*A Summary of Changes section appears at the end of this standard.