



Designation: C ~~1292—95a~~ 1292 – 00

Standard Test Method for Shear Strength of Continuous Fiber-Reinforced Advanced Ceramics at Ambient Temperatures¹

This standard is issued under the fixed designation C 1292; 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 shear strength of continuous fiber-reinforced ceramic composites (CFCCs) at ambient temperature. The test methods addressed are (1) the compression of a double-notched specimen to determine interlaminar shear strength and (2) the Iosipescu test method to determine the shear strength in any one of the material planes of laminated composites. Specimen fabrication methods, testing modes (load or displacement control), testing rates (load rate or displacement rate), data collection, and reporting procedures are addressed.

1.2 This test method is used for testing advanced ceramic or glass matrix composites with continuous fiber reinforcement having uni-directional (1-D) or bi-directional (2-D) fiber architecture. This test method does not address composites with (3-D) fiber architecture or discontinuous fiber-reinforced, whisker-reinforced, or particulate-reinforced ceramics.

1.3 The values stated in SI units are to be regarded as the standard and are in accordance with Practice E 380.

1.4 *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.* Specific hazard statements are given in 8.1 and 8.2.

2. Referenced Documents

2.1 *ASTM Standards:*

C 1145 Terminology ~~on~~ of Advanced Ceramics²

¹ These

¹ This test ~~methods are~~ method is under the jurisdiction of ASTM Committee C-28 on Advanced Ceramics and ~~are~~ is the direct responsibility of Subcommittee C28.07 on Ceramic Matrix Composites.

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