
Standard Method of Test for Flexural Strength of Concrete (Using Simple Beam with Center-Point Loading)

AASHTO Designation: T 177-17 (2021)

Technically Revised: 2017

Reviewed but Not Updated: 2021

Editorially Revised: 2021

Technical Subcommittee: 3c, Hardened Concrete

ASTM Designation: C293-16



**American Association of State Highway and Transportation Officials
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1. SCOPE

- 1.1. This method covers the determination of the flexural strength of concrete specimens by the use of a simple beam with center-point loading. It is not an alternative to T 97.
- 1.2. The values stated in SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in nonconformance with the standard.
- 1.3. *This standard does not purport to address all of the safety concerns 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.*
- 1.4. *The quality of the results produced by this standard are dependent on the competence of the personnel performing the procedure and the capability, calibration, and maintenance of the equipment used. Agencies that meet the criteria of R 18 are generally considered capable of competent and objective testing/sampling/inspection/etc. Users of this standard are cautioned that compliance with R 18 alone does not completely assure reliable results. Reliable results depend on many factors; following the suggestions of R 18 or some similar acceptable guideline provides a means of evaluating and controlling some of those factors.*

2. REFERENCED DOCUMENTS

- 2.1. *AASHTO Standards:*
- R 18, Establishing and Implementing a Quality Management System for Construction Materials Testing Laboratories
 - R 39, Making and Curing Concrete Test Specimens in the Laboratory
 - R 100, Making and Curing Concrete Test Specimens in the Field
 - T 97, Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
 - T 231, Capping Cylindrical Concrete Specimens
- 2.2. *ASTM Standard:*
- E4, Standard Practices for Force Verification of Testing Machines