

Flexural Properties (ASTM D790)

Scope:

The Flexural test measures the force required to bend a beam under 3 point loading conditions. The data is often used to select materials for parts that will support loads without flexing. Flexural modulus is used as an indication of a material's stiffness when flexed. Since the physical properties of many materials (especially thermoplastics) can vary depending on ambient temperature, it is sometimes appropriate to test materials at temperatures that simulate the intended end user environment.

Test Procedure:

Most commonly the specimen lies on a support span and the load is applied to the center by the loading nose producing three points bending at a specified rate. The parameters for this test are the support span; the speed of the loading; and the maximum deflection for the test. These parameters are based on the test specimen thickness, and are defined differently by ASTM and ISO.