

JIS

JAPANESE INDUSTRIAL STANDARD

Testing Methods for
Shear Strength of
Plastics by Punch Tool

JIS K 7214—1985

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JAPANESE INDUSTRIAL STANDARD

Testing Method for Shear Strength of Plastics by Punch Tool

JIS
K 7214-19851. Scope

This Japanese Industrial Standard specifies the testing method for shear strength of plastics by round punch tool, hereinafter, referred to as "test." However, this method is not applicable to foamed plastics.

- Remarks:
1. Various shear properties specified in this method shall be shear strength, shear breaking strength, shear yield strength and shear strength at specified deformation rate.
 2. In case where it is impossible to sample specified test piece of dimensions specified in this body, the test method for shear test by small-size test pieces specified in Appendix may be used.
 3. The units shown in braces { } in this standard are based on the conventional system of units and appended for reference.

2. Definitions

The definitions of the main terms used in this standard shall be as follows besides those specified in JIS K 6900.

- (1) shearing stress The value obtained by dividing the shearing load applied to the test piece at an arbitrary time during a shearing test by the shearing area ⁽¹⁾ of the test piece.
Note ⁽¹⁾ The shearing area is the total sectional area of test piece parts assumed to punch the test piece by punch tool, and indicated by the product of circumference of punch and the thickness of the test piece.
- (2) shear strength The maximum value of shearing stresses generated during a shearing test.
- (3) shear fracture strength The shearing stress at the moment when the test piece has been broken during a shearing test.
- (4) shear yield strength The shearing stress at the point where an increase in deformation or deformation rate ⁽²⁾ is observed for the first time without an increase in load on the load-deformation curve during a shearing test.
Note ⁽²⁾ The deformation rate shall be the value obtained by dividing the distance where the surface pushed by punch of the test piece due to shearing load is separated from the original position of this surface during the test by the thickness of test piece.
- (5) shearing strength at specified deformation rate The shearing stress on the curve of the shearing stress-rate of deformation ⁽²⁾ corresponding to the rate of deformation ⁽²⁾ specified in standard and the like.

Applicable Standards: Reference Standards: See page 12.