



Scope of application

The Iosipescu shear test fixture is used to perform shear tests according to ASTM D5379. This shear test fixture is suitable for the quasi-static characterisation of the shear properties of fibre-reinforced plastics and can be used in all common universal testing machines.

The following laminates can be tested:

- Unidirectional laminates with fibre orientation in 0° - or $0^\circ/90^\circ$ -direction
- Fabric laminates with fibre orientation in $0^\circ/90^\circ$ direction
- Short and long fibre reinforced plastics
- Isotropic materials, e.g. pure resin or adhesive resin materials

The shear test according to ASTM D5379 is performed using an asymmetrically loaded 4-point bending specimen.

The specimen is clamped in the Iosipescu test fixture and loaded via two profiles which are movable relative to each other. The loads are introduced into the specimen via four areas. A V-notch in the specimen determines the location of the failure. The material stress in the specimen represents a transverse load shear stress. The advantage of the Iosipescu test method compared to other shear test methods is the simple and flexible execution of the test. With this method, single- and multi-axis orientated laminates with any fibre orientation can be tested with little effort.

Features & benefits

- 2-column guide of the movable crosshead
- Extended contact surface of the test specimen (optimised load introduction)
- Simple & tool-less clamping of the specimen
- Precise alignment of the specimen by means of centering pin
- Material stainless steel



Technical data

Characteristics	Values
Specimen geometry	76 mm x 19 mm x 2...10 mm
Max. test load	20 kN
Permitted temperature range	-40...+150 °C
Dimensions (W x D x H)	155 mm x 75 mm x 155 mm
Weight	approx. 8 kg

Options

- Adapter for upper mounting in universal testing machine according to customer specification
- Compression plate for lower mounting in universal testing machine according to customer specification

Standards

- ASTM D5379 / D5379M - 12
Standard test method for shear properties of composite materials by the V-notched beam method

