



### Scope of application

The ILSS bending test fixture is used to determine the apparent interlaminar shear strength (ILSS) according to DIN EN ISO 14130 or similar. This test fixture is suitable for the quasi-static characterisation of the bending 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°/90°-direction
- Fabric laminates with fibre orientation in 0°/90° direction
- Short and long fibre reinforced plastics
- Isotropic materials, e.g. pure resin or adhesive resin materials

The short bending test method for determining the apparent interlaminar shear strength is a modification of the 3-point bending test.

The support distance is small in relation to the thickness of the specimen, which means that the specimen is subjected to shear stress. The specimen is a short beam of a thermoplastic or duroplastic matrix with a fibre orientation in 0° or 0°/90° direction. With apparent interlaminar shear strength, the standard describes "the maximum shear stress present in half the thickness of the test specimen at the moment of the first failure".

### Features & benefits

- Rigid and compact test fixture
- Interchangeable support inserts for quick and easy adaptation of the test fixture to the respective test standard
- Precise alignment of the specimen by means of lateral guides and end stop
- Material stainless steel



## Technical data

Characteristics	Values
Specimen geometry	20 mm x 10 mm x 2...3 mm
Radius loading nose	3 mm / 5 mm
Radius supports	1.5 mm / 2 mm / 3 mm
Support span	8 mm / 10 mm / 15 mm
Max. test load	10 kN
Permitted temperature range	-40...+150 °C
Dimensions (W x D x H)	220 mm x 40 mm x 250 mm
Weight	approx. 8 kg

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## 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
- Extension set for carrying out 3-point and 4-point bending tests according to DIN EN ISO 14125, DIN EN ISO 178, ASTM D 7264, ASTM D790, DIN EN 2563 or similar

## Standards

- DIN EN ISO 14130:1998-02  
Determination of apparent interlaminar shear strength by short-beam method
- DIN EN 2377:1989-10  
Test method - determination of apparent interlaminar shear strength
- DIN EN 2563: 1997-03  
Unidirectional laminates - determination of apparent interlaminar shear strength
- ASTM D2344 / D2344M - 16  
Standard test method for short-beam strength of polymer matrix composite materials and their laminates

