

Four-Point Flexure Fixture for Plastics

Built to ASTM D6272 — Standard Test Method for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials by Four-Point Bending

OVERVIEW

Four-point flexure fixture for unreinforced and reinforced plastics and electrical insulating materials. Two loading noses apply load between two supports, producing a region of constant bending moment so failure can occur at the weakest point within the loading span rather than directly under a single nose.

KEY FEATURES

- Selectable load-span ratios: one-third and one-quarter span
- Adjustable support and loading spans
- Hardened, ground supports and loading noses
- Self-aligning loading head equalizes load on both noses
- Deflection measurement provisions at mid-span



TECHNICAL SPECIFICATIONS

Test method	Flexural properties by four-point bending
Test type / loading	Four-point bend, 1/3 or 1/4 span loading
Specimens	Rectangular bars, per ASTM D6272 geometry
Load capacity	10 kN standard; higher capacities on request
Fixture material	Hardened tool steel, corrosion-resistant finish
Loading members	Hardened, ground supports and loading noses
Machine connection	Clevis pin or threaded adapter, to suit customer frame
Compatible frames	Electromechanical and servo-hydraulic universal test machines

APPLICATIONS

- Molded and extruded plastics
- Fiber-reinforced composites
- Electrical insulating laminates
- Material data and QC testing

ABOUT THE STANDARD

ASTM D6272 determines the flexural properties of unreinforced and reinforced plastics, including high-modulus composites, and electrical insulating materials using four-point bending. A bar specimen rests on two supports and is loaded at two points, at one-third or one-quarter of the support span. Flexural modulus, flexural strength and stress at specified strain are reported.

Ordering & customization: Specify specimen dimensions, span range, load-span ratio, required capacity and test machine connection when ordering.

Specifications are typical and may vary by configuration; confirm at time of quote. Users should refer to the current edition of the standard for test procedures. Part ref. UGC-D6272-BF