Flatwise Tensile Fixture for Sandwich Constructions

Built to ASTM C297 — Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions



OVERVIEW

Flatwise tensile fixture for sandwich constructions per ASTM C297. The sandwich specimen is bonded between two loading blocks, and self-aligning connections pull the blocks apart normal to the facings, measuring the tensile strength of the core or of the core-to-facing bond.

KEY FEATURES

- Self-aligning universal joints reduce peel and bending
- Thick, rigid loading blocks for uniform stress distribution
- Blocks reusable after cleaning and re-machining
- Square or round block options to match specimen shape
- Supplied with adapters to suit your load frame (clevis or threaded)

TECHNICAL SPECIFICATIONS

Test method	Flatwise tension per ASTM C297
Test type / loading	Axial tension normal to facings
Specimens	Sandwich specimens bonded to blocks, per ASTM C297
Load capacity	50 kN standard; higher capacities on request
Fixture material	Heat-treated alloy steel or aluminum blocks
Bonding surfaces	Machined loading block faces
Machine connection	Clevis pin or threaded adapter, to suit customer frame
Compatible frames	Electromechanical and servo-hydraulic universal test machines

APPLICATIONS

- Honeycomb and foam sandwich panels
- Core-to-facing bond quality
- Aerospace and marine composites
- Adhesive film qualification

ABOUT THE STANDARD

ASTM C297 determines the flatwise tensile strength of the core, the core-to-facing bond or the facings of sandwich panels, loading perpendicular to the plane of the panel. Specimens are bonded to thick loading blocks, and the failure load and mode are reported to assess bond quality and core strength.

Ordering & customization: Specify specimen size and shape, number of spare loading blocks 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-C297-TF