Examples of Material Property Testing

Advanced Structures & Composites Center, University of Maine

Follow this and additional works at: https://digitalcommons.library.umaine.edu/univ_publications

Part of the Higher Education Commons, History Commons, and the Structural Engineering Commons

Repository Citation
https://digitalcommons.library.umaine.edu/univ_publications/1995

This Other is brought to you for free and open access by DigitalCommons@UMaine. It has been accepted for inclusion in General University of Maine Publications by an authorized administrator of DigitalCommons@UMaine. For more information, please contact um.library.technical.services@maine.edu.
### ADHESIVES

- **ASTM D905** | Strength Properties of Adhesive Bonds in Shear by Compression Loading
- **ASTMD1101** | Integrity of Adhesive Joints in Laminated Wood Products for Exterior Use
- **ASTM D2339** | Strength Properties of Adhesives in Two-Ply Wood Construction in Shear
- **ASTM D2559** | Standard Specification for Adhesives for Structural Laminated Wood Products
- **ASTM D3165** | Lap Shear Strength Properties of Adhesives
- **ASTM D5868** | Lap Shear Adhesion for Fiber Reinforced (FRP) Plastic Bonding

### COMPOSITE MATERIALS

- **ASTM C393** | Flexural Properties of Sandwich Constructions
- **ASTMD2344** | Short-beam Strength of Polymer Matrix Composite Materials and Their Laminates
- **ASTM D2584** | Ignition Loss of Cured Reinforced Resins
- **ASTM D3039** | Tensile Properties of Polymer Matrix Composite Materials
- **ASTM D3410** | Compressive Properties of Composite Materials by Shear Loading
- **ASTM D3479** | Tension-Tension Fatigue of Polymer Matrix Composite Materials
- **ASTM D3518** | In-Plane Shear of Composite Materials by Tensile Test of a ±45° Laminate
- **ASTM D4255** | Standard Guide for Testing In-plane Shear Properties of Composite Laminates
- **ASTM D5379** | Shear Properties of Composite Materials by the V-Notched Beam Method
- **ASTM D5528** | Mode I Interlaminar Fracture Toughness of Unidirectional Composites
- **ASTM D5766** | Open Hole Tensile Strength of Polymer Matrix Composite Laminates
- **ASTM D6115** | Mode I Fatigue Delamination Growth Onset of Unidirectional Composites
- **ASTM D6641** | Compressive Properties of Composite Laminates
- **ASTM F1679** | Using a Variable Incidence Tribometer (VIT)

### FASTENERS

- **ASTM D1761** | Standard Test Methods for Mechanical Fasteners in Wood

### PLASTIC MATERIALS

- **ASTM D256** | Determining the Izod Pendulum Impact Resistance of Plastics
- **ASTM D635** | Rate of Burning of Plastics in a Horizontal Position
- **ASTM D638** | Tensile Properties of Plastics
- **ASTM D695** | Compressive Properties of Rigid Plastics
- **ASTM D696** | Coefficient of Linear Thermal Expansion
- **ASTM D790** | Flexural Properties of Plastics
- **ASTM D792** | Density and Specific Gravity of Plastics by Displacement
- **ASTM D953** | Bearing Strength of Plastics
- **ASTM D2765** | Determination of Gel Content and Swell Ratio of Crosslinked Ethylene Plastics
- **ASTM D3846** | In-Plane Shear Strength of Reinforced Plastics
- **ASTM D4065** | Dynamic Mechanical Properties
- **ASTM D4812** | Unnotched Cantilever Beam Impact Strength of Plastics
- **ASTM D6109** | Flexural Properties of Unreinforced and Reinforced Plastic Lumber
- **ASTM D6110** | Determining the Charpy Impact Resistance of Notched Specimens of Plastics

### STRUCTURAL

- **ASTM C273** | Shear Properties of Sandwich Core Materials
- **ASTMD7032** | Performance Ratings for Wood-Plastic Composite Deck Boards and Guardrail Systems (Guards or Handrails)
- **ASTM E72** | (Sec. 11 only) Conducting Strength Tests of Panels for Building Construction
- **ASTM E564** | Static Load Test for Shear Resistance of Framed Walls for Buildings
- **ASTM E2126** | Cyclic (Reversed) Load Test for Shear Resistance of Vertical Elements of the Lateral Force Resisting Systems for Buildings

### WOOD PRODUCTS

- **ASTM D198** | Static Tests of Lumber in Structural Sizes
- **ASTMD143** | Testing Small Clear Specimens of Timber
- **ASTM D245** | Structural Grades and Related Allowable Properties for Visually Graded Lumber
- **ASTM D1037** | Evaluating Properties of Wood-Base Fiber and Particle Panel Materials
- **ASTM D2395** | Specific Gravity of Wood and Wood-Based Materials
- **ASTM D2555** | Establishing Clear Wood Strength Values
- **ASTM D3737** | Establishing Allowable Properties for Structural Glued Laminated Timber (Glulam)
- **ASTM D4442** | Direct Moisture Content Measurement of Wood and Wood-Base Material
- **ASTM D4761** | Mechanical Properties of Lumber and Wood-Base Structural Material
- **ASTM D4933** | Moisture Conditioning of Wood and Wood-Based Materials
- **ASTM D5456** | Evaluation of Structural Composite Lumber Products
- **ASTM D6815** | Duration of Load and Creep Effects of Wood and Wood-Based Products

---

For more information, contact:  
**Dr. Habib Dagher, P.E.,**  
Director, UMaine Advanced Structures and Composites Center  
hd@maine.edu  
composites.umaine.edu  
(207) 581-2123