

LAB CAPABILITIES - 01/2013

1. DSC
 - a. Glass transition temperature
 - b. Melting point
 - c. Exotherm energy
 - d. Specific heat (liquid only)
 - e. % cure
 - f. Off-ratio analysis
 - g. Onset temperature
2. FT-IR
 - a. Material characterization
 - b. Unknown identity analysis
 - c. Impurity analysis
 - d. Component identification (resin/hardener rich)
3. LASER FLASH ANALYZER
 - a. Thermal conductivity
 - b. Thermal diffusivity
 - c. Specific heat (solids only)
 - d. Solid, liquid, and multi-layer analysis
4. RHEOMETER & VISCOMETER
 - a. Viscosity
 - b. Yield stress analysis
 - c. Linear viscoelasticity
 - d. Cure analysis
 - e. Expansion upon cure
 - f. Lead-lag analysis
 - g. Compressibility
 - h. Creep analysis (change in viscosity as a function of time)
5. MECHANICAL TESTER
 - a. Tensile properties (strength, yield, elongation, modulus)
 - b. Compression properties (strength, yield, resiliency, modulus)
 - c. Lap shear strength
 - d. Peel strength (180° peel)
 - e. Flexural properties (strength, yield, modulus)
6. DUROMETER
 - a. Shore-A hardness
 - b. Shore-D hardness
 - c. Shore-OO hardness

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7. TEMPERATURE ANALYSIS

- a. Exotherm profile (temperature as a function of cure)
- b. Peak temperature analysis
- c. Freeze profile

8. FLAMMABILITY TESTING

- a. UL 94 vertical testing
- b. UL 94 horizontal burn testing
Note Resinlab performs similar test to UL 94, but cannot certify a material for any flammability ratings.

9. PRESS-FLOW ANALYSIS

10. BENCH TESTING

- a. Pot-life, snap-time, gel-time, work-life analysis
- b. Hegman fineness of grind
- c. Slump and sag resistance
- d. % solids and % non-volatile materials
- e. Water absorption
- f. pH
- g. Material separation analysis