

ATD 2000 ESR™

Robust design • Easy to use
Repeatable results



ALPHATECHNOLOGIES
A Dynisco Company

The ATD 2000 ESR™ from Alpha Technologies is the first and only control system that allows you to monitor *pre-preg* material properties in real time throughout the entire cure cycle for optimal cure state management.

- Unique design provides repeatable results for determining the viscoelastic properties of pre-preg as well as neat resins, adhesives, sealants and compounds such as BMC and SMC.
- Determines the direct pre-preg material state for optimal cure state management.
- Serves a wide range of applications including, QA, Production, MR&D and Lab R&D.
- Sample prep and test setup is quick and simple.
- Robust design withstands heavy use in a wide range of settings and environments.

ATD 2000 ESR Specifications

TEMPERATURE:	RT to 230°C (446°F)
TEST MODES:	Controlled Stress Controlled Strain
STRAIN:	± 0.02 to 90° ± 0.3 to 1200%
FREQUENCY:	0.1 to 2000 CPM
DIE CONFIGURATION:	Parallel Plate
SAMPLE SIZE:	Thickness: 3 mm Diameter: 41.3 mm
SAMPLE CAVITY PRESSURE:	300 to 1200 psi

*Detailed specifications available upon request.
Supports Material State Management™ for advanced composites applications,
a unique collaboration between Alpha Technologies and AvPro, Inc.*



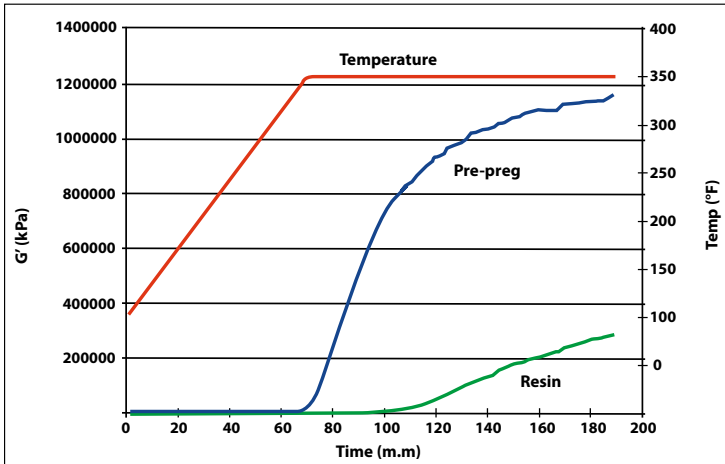
**To learn more,
contact Alpha Technologies**

3030 Gilchrist Road
Akron, OH 44305
330-653-3797
David.Kesic@dynisco.com

ATD 2000 ESR™

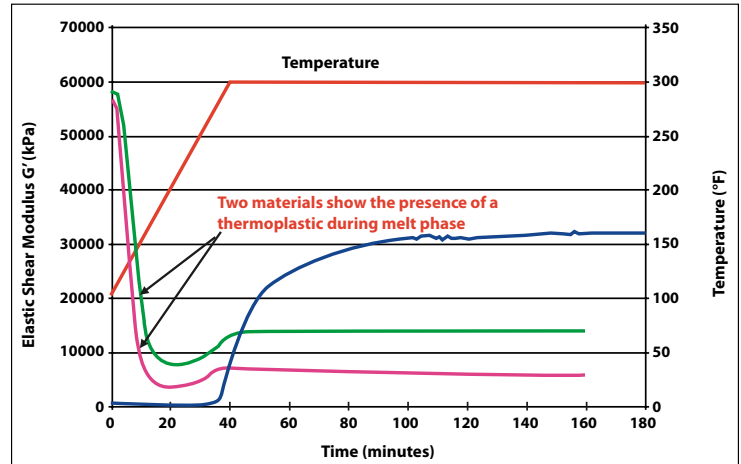
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Neat Resin and Pre-Preg



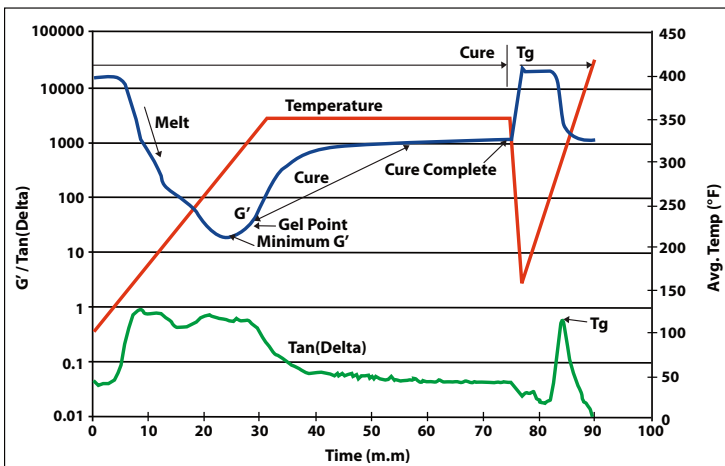
Ability of the ATD 2000 ESR™ to determine the viscoelastic properties of both neat resin and pre-preg throughout the entire cure cycle.

Comparison of Cure in Three Different Pre-Pregs



ATD 2000 ESR™ can quickly differentiate between material systems as displayed above on these three pre-pregs. Two materials display a thermoplastic modified system, while the unmodified system (blue) shows a substantially different modulus profile.

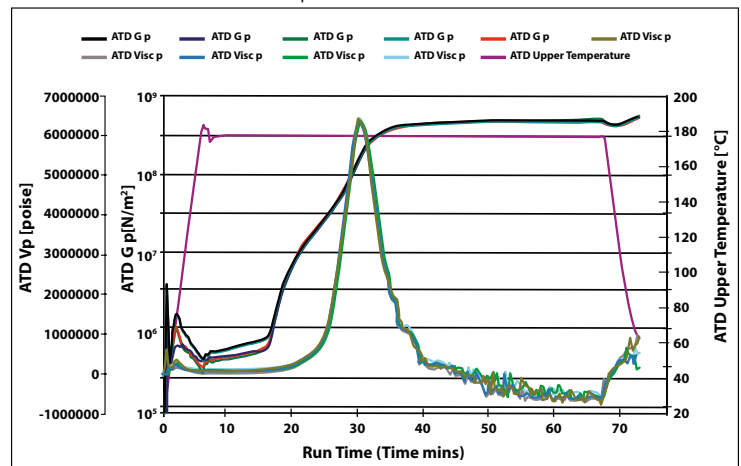
Characterization of Laminate Cure



Ability of ATD 2000 ESR™ to determine material changes at critical stages of the curing process through final cure.

NCMS-RR-10-PH1-DS1

comparison of runs at location 10



Multiple runs on the ATD 2000 ESR™ displaying the system's outstanding repeatability.