

arovex™

Product Line: Arovex 250

Introduction

Arovex 250 is a 250°F to 300°F cure, carbon nanotube strengthened prepreg system suitable for numerous composites applications.

Available in widths up to 60 inches for standard woven fabrics. Unitape widths up to 24 inches in 80 gsm to 300 gsm.

The carbon nanotube enhancement makes Arovex a high strength and high stiffness prepreg system. It also processes as easily as conventional prepreps and has a long out-life for easier handling and processing.

Features

Enhanced mechanical properties with a medium tack. Strengthened with an optimum level of carbon nanotubes for additional toughness. 30 day out-life at 72°F, one year at 0°F. Available with most commercial woven fabrics, and a large range of unidirectional fibers.

Processes

Vacuum bagged, oven cured
Autoclaved
Hot press

Applications

Carbon
E-Glass
S-Glass
Aramid
Other fabrics on request



Characteristics¹

Arovex tested with Toho G30-700 fiber with a resin content of 38% (others available)

Test	Test Method	Value	
0° Flexural Strength	ASTM D 0790	265 (ksi)	- 1827 (MPa)
0° Flexural Modulus	ASTM D 0790	25.5 (Msi)	- 177 (GPa)
0° Tensile Strength	ASTM D 3039	371 (ksi)	- 2558 (MPa)
0° Tensile Modulus	ASTM D 3039	22.0 (Msi)	- 152 (GPa)
0° Compressive Strength	SACMA SRM 1R-94	170 (ksi)	- 1172 (MPa)
0° Compressive Modulus	SACMA SRM 1R-94	20.4 (Msi)	- 141 (GPa)
GIC Strain Energy Release	ASTM D 5528-07	3.0 (in-lb/in²) - 525 (j/m²)	

Mechanical data obtained by independent third party testing. Values normalized to 60% fiber volume. Values are typical and are not intended as a specification value

Arovex Comparison to Industry Standard Conventional Prepreg²

Flexural Strength (ASTM D790)	+18%
Flexural Modulus (ASTM D790)	+50%
Tensile Strength (ASTM D 3039)	+20%
Tensile Modulus (ASTM D 3039)	+17%
Compression Strength (ASTM D695)	+28%
Compression Modulus (ASTM D695)	+17%
GIC Strain Energy Release (ASTM D 5528-07)	+42%

¹ Typical characteristics and properties, not to be used as specifications.

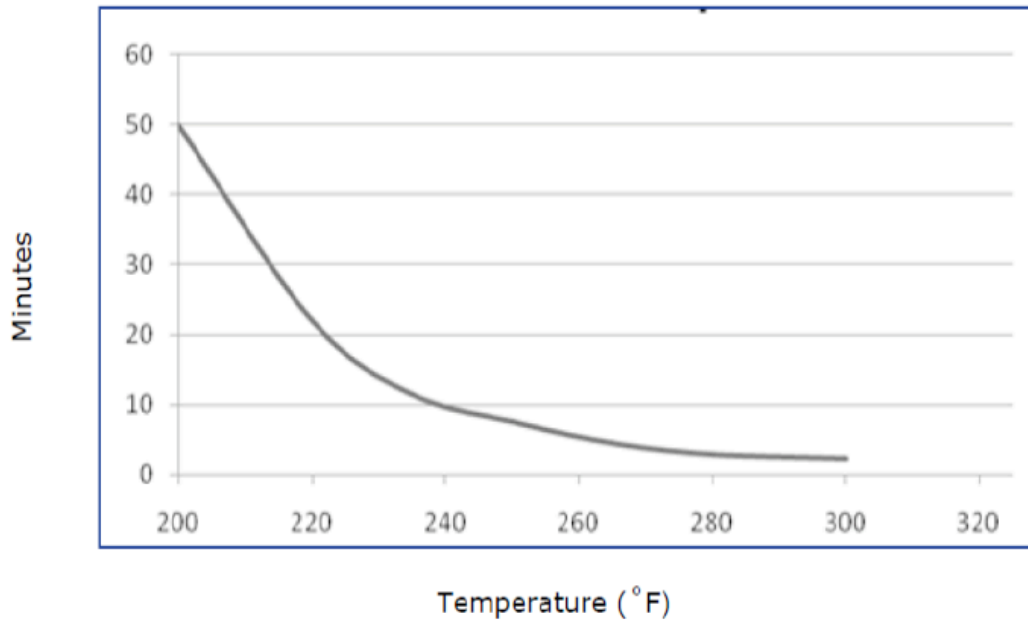
² Mechanical data obtained by independent third party testing. Arovex made with G30-700 fiber, with a resin content of 38%. Values normalized to 60% fiber volume. Values are typical and are not intended as a specification value.

Prepreg Storage Life

Tack life: 21 days @ 72 F
Out life: 30 days @ 72 F
Shelf life: 1 year @ 0 F

Recommended Cure

Temperature ramp 2 – 7 F per minute to 250 F. Hold at 250 F for one hour, cool to < 140 F. Minimum pressure is 20 psi, recommend 50 psi to 90 psi.



Safety & Handling

Zyvex Performance Materials (ZPM) provides its customers with a product specific Material Safety Data Sheet (MSDS) to cover potential health effects, safe handling, and use information.

ZPM encourages its customers to review the **Arovex** MSDS prior to use.

Contact Information

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Applications and Processes listed are only suggestions; other applications and processes are possible.

All products are sold pursuant to ZPM standard terms and conditions. It is expressly understood and agreed that the customer assumes and releases ZPM from all liability, in tort, contract, or otherwise incurred in connection with the use, results, health & safety effects, handling, and disposal of Epovex epoxy. Nothing herein shall be construed as a recommendation to use an Epovex epoxy in conflict with any patents or other intellectual property.

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