

arovex™

next generation prepreg

Carbon Nanotube Enhanced Prepreg

Introduction

Arovex 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 prepregs and has a long out-life for easier handling and processing.

Features

Strengthened with an optimum level of carbon nanotubes for enhanced mechanical properties with a medium tack. 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

Physical Properties¹



Arovex Standard Modulus Unidirectional Carbon Fiber Tape

Arovex	Test Method	Value
0° Flexural Strength	ASTM D 0790	265(ksi)
0° Flexural Modulus	ASTM D 0790	25.5 (Msi)
0° Tensile Strength	ASTM D 3039	371 (ksi)
0° Tensile Modulus	ASTM D 3039	22.0 (Msi)
0° Compressive Strength	SACMA SRM 1R-94	170 (ksi)
0° Compressive Modulus	SACMA SRM 1R-94	20.4 (Msi)
Glc Strain Energy Release	ASTM D 5528-07	3.0 in-lbs/in ²

Arovex Comparison to Industry Standard Conventional Prepreg¹

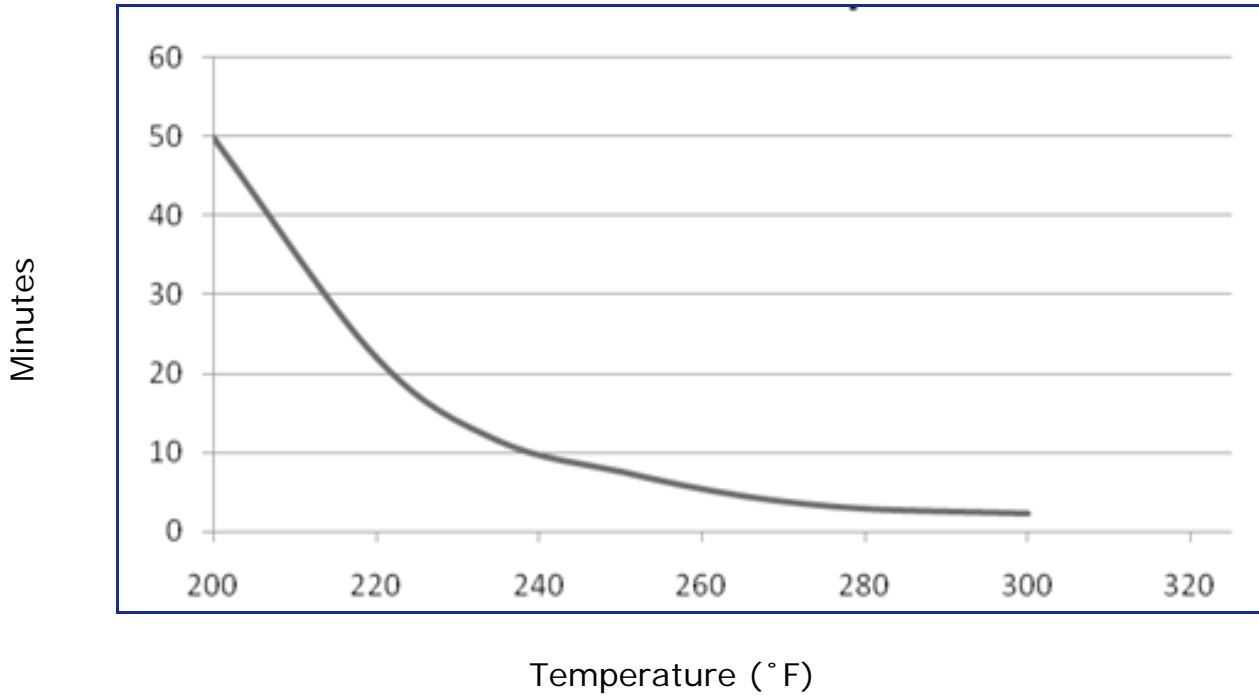
Flexural Strength (ASTM D790)	+18%
Flexural Modulus (ASTM D790)	+50%
Tensile Strength (ASTM D 3039)	+20%
Tensile Modulus (ASTM D 3039)	+17%
Compressive Modulus (SACMA SRM 1R-94)	+28%
Compressive Strength (SACMA SRM 1R-94)	+17%
Glc Strain Energy Release (ASTM D 5528-07)	+42%

¹Mechanical 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.

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.

Gel Time Versus Temperature



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 MSDS prior to use.

Contact Information

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

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