

L-543

Woven Fiberglass Polyester Prepreg



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Product Data Sheet

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Description

L-543 is a 260°F (127°C) curing polyester prepreg with excellent laminating properties. L-543 is available on 7781 style glass fabric or other styles of fabric as requested. L-543 is intended to be used as a single ply or multiple ply laminate for the manufacture of high quality plastic detail parts. L-543 meets the requirements of MIL-R-7575.

Advantages of L-543

- ❖ L-543 allows the designer to create parts with excellent dimensional stability while maintaining excellent electrical and mechanical properties.
- ❖ L-543 is formulated with a flame-retardant polymer matrix designed to meet stringent requirements for electronics, marine, and aircraft applications.
- ❖ Processing of L-543 can be easily adapted to most heated presses or autoclaves.
- ❖ L-543 is also an excellent laminating prepreg when heat resistance is a requirement.

Physical Properties on 7781 Glass Fabric

- *Standard Weight:* 0.105 lbs/ft² (512 g/m²)
- *Standard Resin Solids:* 40% by weight
- *Volatile Content:* 2-4%
- *Standard Tack:* Medium
- *Cured Ply Thickness:* 0.010" (0.254 mm)
- *Other Weights, Resin Contents, and Fabrics are Available.*

Availability

- *Up to 60" width in rolls up to 80 yards long (152 cm x 73 m)*

Shelf Life

- *6 months at 45°F (7°C) or below*
- *10 days at Room Temperature*

Cure Cycle

- *90 minutes at 260°F (127°C). Adjust pressure as needed. Vacuum, press, or autoclave.*
- *Other cycles may be developed by the user.*



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Flammability

- ❖ L-543 is inherently flame retardant, and will pass UL-94 V-0 and FAR 25.853 burn requirements.

Mechanical Properties

Tested per MIL-R-7575C Grade A	Test Method	Requirement	Average
Flexural Strength	ASTM D790	50.0 ksi (345 MPa)	91.5 ksi (631 MPa)
Flexural Modulus	ASTM D790	2.7 msi (19 GPa)	3.3 msi (23 GPa)
Tensile Strength	ASTM D638	40.0 ksi (276 MPa)	61.6 ksi (425 MPa)
Compressive Strength	ASTM D695	35.0 ksi (241 MPa)	60.1 ksi (414 MPa)
Flammability (inch/min)	ASTM D635	1.0 (max)	did not reach reference
Water Absorption, 24 hr soak, % wt change	ASTM D570	+0.5 (max)	0.04
Barcol Hardness	see 4.6.4	55	81
Specific Gravity	ASTM D792	report	2.079
Resin Content (%)	ASTM C613	report	32.4
<i>Tested Wet</i> - Flexural Strength	ASTM D790	45.0 ksi (310 MPa)	85.4 ksi (589 MPa)
<i>Tested Wet</i> - Flexural Modulus	ASTM D790	2.5 msi (17 GPa)	3.6 msi (25 GPa)
<i>Tested Wet</i> - Tensile Strength	ASTM D638	38.0 ksi (262 MPa)	62.1 ksi (428 MPa)
<i>Tested Wet</i> - Compressive Strength	ASTM D695	30.0 ksi (207 MPa)	56.9 ksi (392 MPa)
<i>Tested @ 156°F (70°C)</i> - Flexural Strength	ASTM D790	40.0 ksi (276 MPa)	48.8 ksi (337 MPa)
<i>Tested @ 156°F (70°C)</i> - Flexural Modulus	ASTM D790	2.3 msi (16 GPa)	2.6 msi (18 GPa)
<i>MIL-H-5606 Hydraulic Fluid (24 hr soak at RT)</i>			
% change in wt / % change in thickness	ASTM D543	0.2 (max)	0.04 / 0
Flexural Strength	ASTM D790	report	93.9 ksi (648 MPa)
<i>TT-I-735 Isopropyl Alcohol (24 hr soak at RT)</i>			
% change in wt / % change in thickness	ASTM D543	0.1 (max)	0.03 / 0
Flexural Strength	ASTM D790	report	88.7 ksi (612 MPa)
<i>TT-S-735 Standard Test Fluids, Hydrocarbon, Type III (24 hr soak at RT)</i>			
% change in wt / % change in thickness	ASTM D543	0.1 (max)	0.06 / 0
Flexural Strength	ASTM D790	report	96.9 ksi (668 GPa)

NOTICE:

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