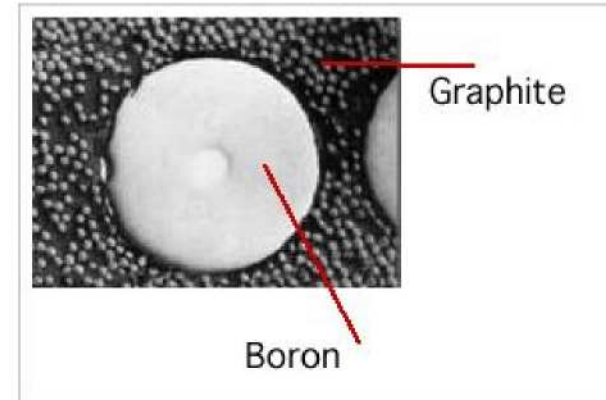


Specialty Materials, Inc.

HY-BOR® PREPREG TAPE

Combining Specialty Materials' boron fiber with carbon prepreg, Hy-Bor® is a high-performance material with exceptional properties that offers a great carbon fiber alternative. Our standard Hy-Bor® product utilizes Mitsubishi Rayon's MR-40 carbon fiber and NCT301 250°F-cure epoxy resin and our 4-mil diameter boron fiber. However, Hy-Bor® can be manufactured to incorporate any commercially available carbon prepreg. By altering the spacing of the boron fiber in the prepreg, performance properties and material costs can be tailored to meet the needs of a variety of demanding applications.

- Hy-Bor® is a hybrid-fiber preform of boron fiber and commercially-available carbon prepreg
- Boron can be added in full-count (208 fpi) or reduced counts (principally 100 fpi)
- Nominal cured ply thickness increases to 0.0065-in. (full-count) or 0.005-in. (100 fpi)
- Increased flexural and compression properties
- Improved open-hole compression strength
- Reduced carbon ply-count can be achieved in compression-critical designs
- Properties are tailorable with varying boron fiber count and carbon prepreg configurations
- Cure cycle information is provided under the **USE & SAFETY TAB**



Boron Fiber

Boron Fiber Properties

Boron Prepreg Tape

Boron Prepreg Properties

Hy-Bor® Prepreg Tape Properties

Hy-Bor® Properties vs Standard Preforms

Boron Compression Strength Analysis

Hy-Bor® Fiber Count and Compression Strength

Unidirectional Dry Woven Boron

Specialty Materials, Inc.

HY-BOR® PREPREG TAPE PROPERTIES

Property	Units	Hy-Bor® 208*	Hy-Bor®100*
Filaments per Inch of Tape Width	fpi	208	100
Tensile Strength	MPa	1,900	1,620
	ksi	275	235
Tensile Modulus	GPa	240	207
	msi	35	30
Flexural Strength	MPa	2,410	2,280
	ksi	350	330
Flexural Modulus	GPa	215	207
	msi	31	30
Compression Strength	MPa	2,760	2,340
	ksi	400	340
Compression Modulus	GPa	240	193
	msi	35	28
Interlaminar Shear Strength	MPa	103	103
	ksi	15	15
Short Beam Shear Strength	MPa	90	-
	ksi	13	-
Cured Ply Thickness	mm	0.165	0.125
	in.x10 ⁻³	6.5	5
Areal Weight	g/m ²	330	240
	lbs/ft ²	0.067	0.049
Density	g/cc	1.97	1.82
	lb/in ³	0.071	0.065
<p>*Prepreg Characteristics Resin Content 24-28wt.% Volatile Content < 2% Gel Time 10 minutes @ 250°F (nom.) Resin Flow 15% (nom.) Tack 30 minutes (min.)</p>			