



# Speedboard® C

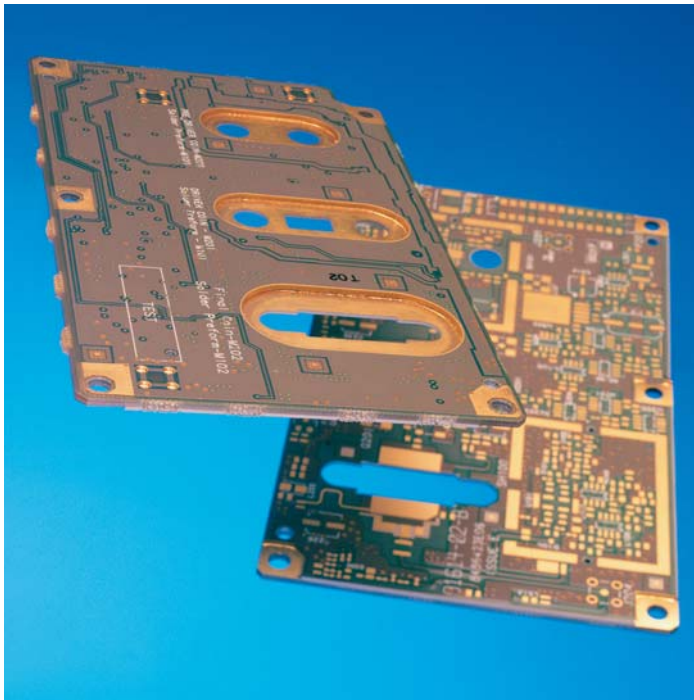
PREPREG

## Summary

GORE™ SPEEDBOARD® C Prepreg is the lowest loss, lowest Dk thermoset prepreg compatible with all commercial laminates. This product exhibits controlled X-Y resin flow for superior performance in cavity designs. The material consists of standard BT resin in a continuous toughening matrix.

## TYPICAL APPLICATIONS

- Base station power amplifiers and other cavity PCBs
- High speed digital backplanes, routers, and servers
- RF and microwave boards
- High speed test PCBs



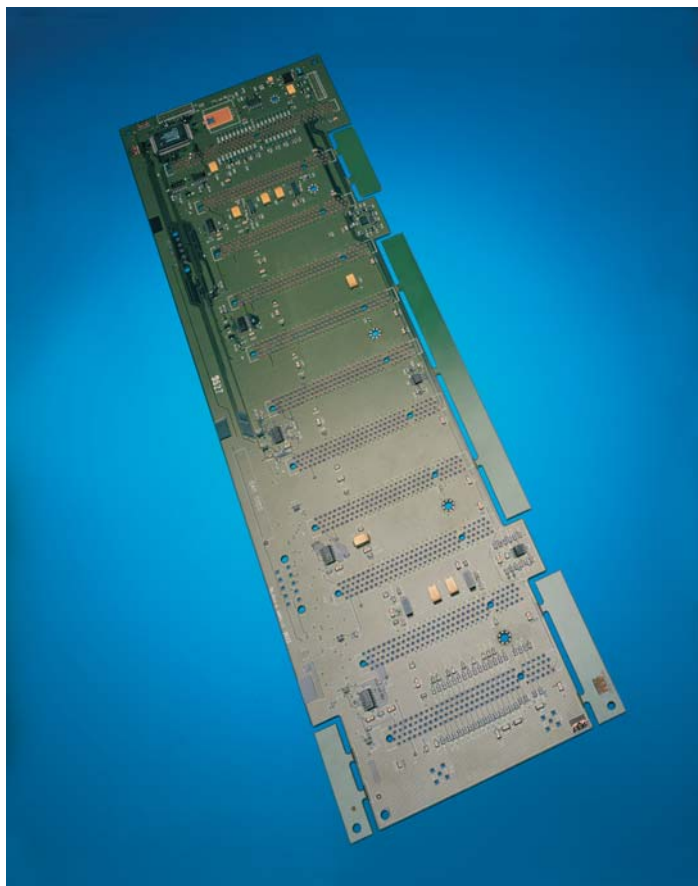
## FEATURES AND BENEFITS

- Electrical
  - Low loss for high speed signal integrity
  - Low Dk provides faster signal speeds
  - Stable Dk (2.6) and loss (0.004) from 1MHz–40GHz
  - Wider traces for higher bandwidth
  - Superior thickness uniformity for controlled impedance layers
  - Reduced crosstalk with increased routability
- Reliability
  - High Tg for Pb-free multiple laminations or solder reflows
  - Micro reinforced for superior crack resistance
  - Excellent adhesion to all commercial cores
  - Compatible with Omega-ply
  - Low outgassing for space applications
- Processing
  - Controlled X-Y resin flow for cavity designs
  - Fills buried vias during lamination
  - Standard high Tg FR4 lamination cycle
  - Laser drilling 2–5x faster than glass prepregs
- High Density
  - Thinner boards for high layer count PCBs and improved PTH aspect ratios
  - Minimizes trace “print-through”
  - Excellent choice for high frequency outlayers



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## MATERIAL PROPERTIES

Property	Unit	Test Condition	Typical Value
Dielectric constant (Dk)	—	Split post resonant cavity (1MHz–40GHz)	2.6
Loss tangent (Df)	—	Split post resonant cavity (1MHz–40GHz)	0.004
Peel strength	Kg/cm (pli)	17 µm (1/2 oz) VLP foil	1.0
Solder resistance	—	288°C; 6x30 sec	Pass
CTE (X, Y, Z)	ppm/°C	TMA (–55 to +200°C)	56
Glass transition temperature	°C (°F)	TMA	220 (428)
Thickness	µm		38, 51, 57, 86
	(mil)		(1.5, 2.0, 2.2, 3.4)

## ROHS STATUS

RoHS Material*	Pass/Fail
Lead (Pb) Content	Pass
Cadmium (Cd) Content	Pass
Hexavalent Chromium (Cr6) Content	Pass
Mercury (Hg) Content	Pass
Bromine Compounds	Pass

\*W. L. Gore & Associates declares that we do not intentionally add substances listed in Directive 2002/95/EU to GORE™ SPEEDBOARD® C Prepreg. Independent lab tests have been performed and results are available upon request.

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North America  
1 (800) 445-GORE (4673)

Europe  
+49 9144 6010  
+44 1382 561511

International  
1 (302) 292-5100

China: Beijing  
+86 10 6510 2980

China: Shanghai  
+86 21 6247 1999

China: Shenzhen  
+86 755 8359 8262

[gore.com](http://gore.com)

More international phone numbers can be found at [gore.com/phone](http://gore.com/phone)

Japan  
+81 3 3570 8712

Korea  
+82 2 393-3411

Taiwan  
+886 2 8771 7799

Singapore  
+65 6 733 2882

