



GORE™ Prepreg

G620

Summary

GORE™ G620 Prepreg allows production of reliable, cost sensitive, chip-set substrate packages using standard build-up construction techniques. GORE™ G620 Prepreg offers improved electrical performance with reduced processing cost.

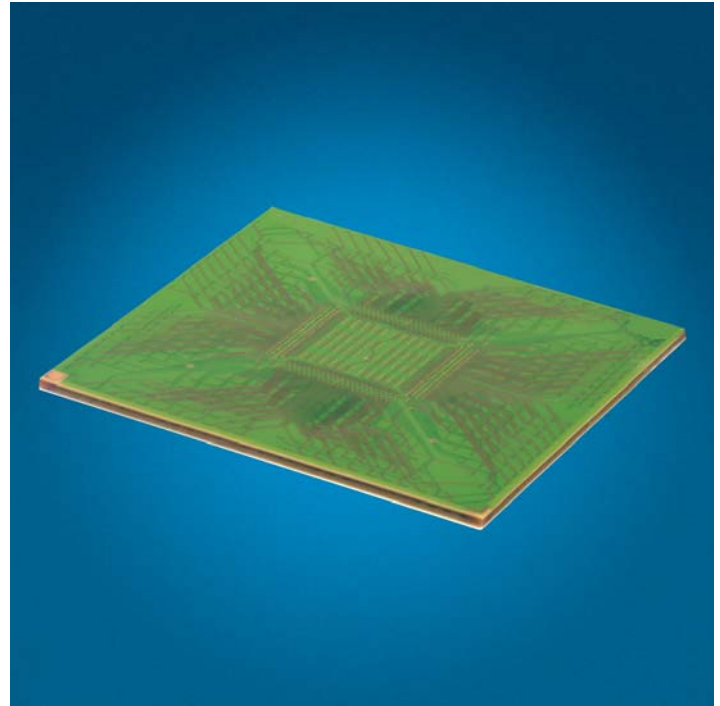
TYPICAL APPLICATIONS

- Traditional build-up style chip package substrates
- Flipchip and wirebond chip set substrates

TYPICAL MATERIAL PROPERTIES

Property		Method	Value*
Dielectric constant	3GHz	LCR Air Gap	2.8
Loss tangent	3GHz	LCR Air Gap	0.015
Glass transition temperature (Tg)		TMA	155°C
Coefficient of thermal expansion (CTE)		TMA (-55 to +125°C)	55 ppm/°C (X, Y, Z)
Flammability		UL	94 V-0
Moisture absorption		24-hr. immersion, 20°C	0.1% w/w
Peel strength		IPC-TM-650 Method 2.4.9 17 µm copper (1/2 oz)	1.1 Kg/cm
Pressed thickness		IPC-TM-650 Method 2.4.38	30, 40, 60 µm

* Typical properties are not specification limits, but nominal performance values



FEATURES AND BENEFITS

- Superior laser drilling speeds and quality
- Stable Dk and Df over a wide frequency range
- Excellent thickness control for superior power distribution impedance
- Proven moisture reliability
- Processes with standard build-up substrate package techniques



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SUBSTRATE RELIABILITY INFORMATION

Item	Test Method	Condition	Result
Preconditioning	JEDEC JESD22-A113A Level 3	30°C; 60% RH; followed by 3 reflows at 225°C	Pass
Thermal cycling	JESD22-A104A Condition C	3,000 cycles; -65°C to +155°C; air-to-air	Pass
Pressure cooker test	JEDEC JESD22-A102C, D	168 hrs; 15 psig; 121°C	Pass
High Temperature Storage (HST)	JESD22-A103B	150°C; 1,000 hrs	Pass
Highly Accelerated Temperature and Humidity (HAST)	JEDEC JESD22-A101B	130°C; 85% RH; 33.3 psig, 96 hrs	Pass

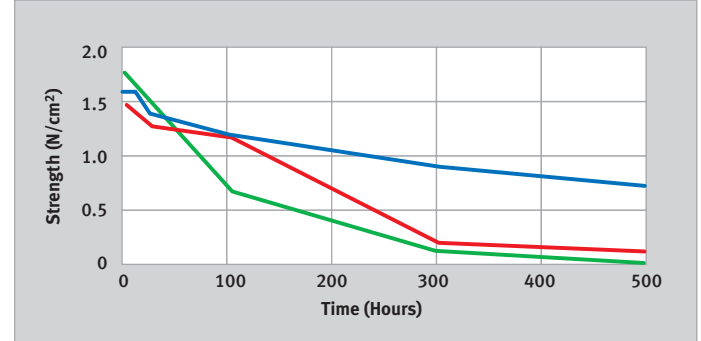
ROHS STATUS

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

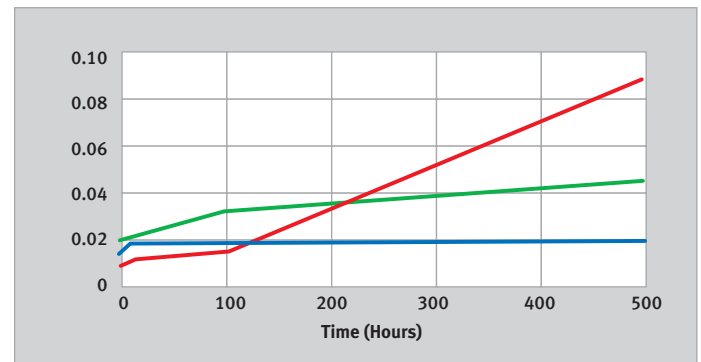
*W. L. Gore & Associates declares that we do not intentionally add substances listed in Directive 2002/95/EU to GORE™ G620 Prepreg. Independent lab tests have been performed and results are available upon request.

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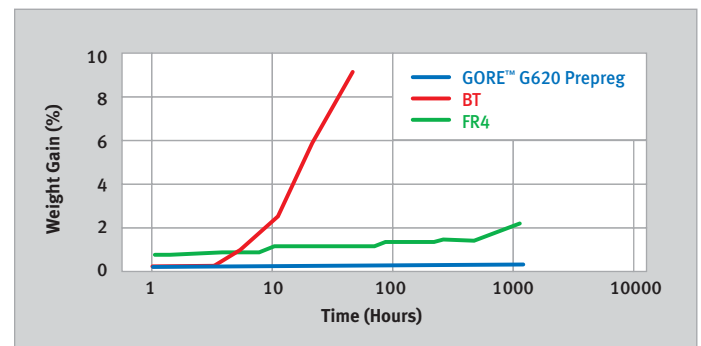
PEEL STRENGTH AFTER PCT (121°C; 2 ATM)



LOSS TANGENT AFTER PCT (121°C; 2 ATM)



MOISTURE ABSORPTION (PCT 121°C; 2 ATM)



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