



Gore-Shield®

GS500 DIE-CUT EMI GASKETS

Summary

GORE-SHIELD® GS500 EMI Gasket Foam is a conductive, adhesive backed, EMI gasketing material that is moderately soft and is ideally suited for wireless infrastructure and telecommunications applications.

GORE-SHIELD® GS500 EMI Gasket Foam can be supplied in die cut part forms or in slit width rolls. Slit width material is ideal for manual “peel and stick” EMI gasketing applications.

GORE-SHIELD® GS500 EMI Gasket Foam consists of a carbon filled cellular PTFE matrix, a conductive pressure sensitive adhesive, and a PET carrier film (See Figure 1).

APPLICATIONS

EMI shielding for wireless infrastructure equipment, high frequency cable connectors, and telecommunications equipment in addition to portable electronic devices.

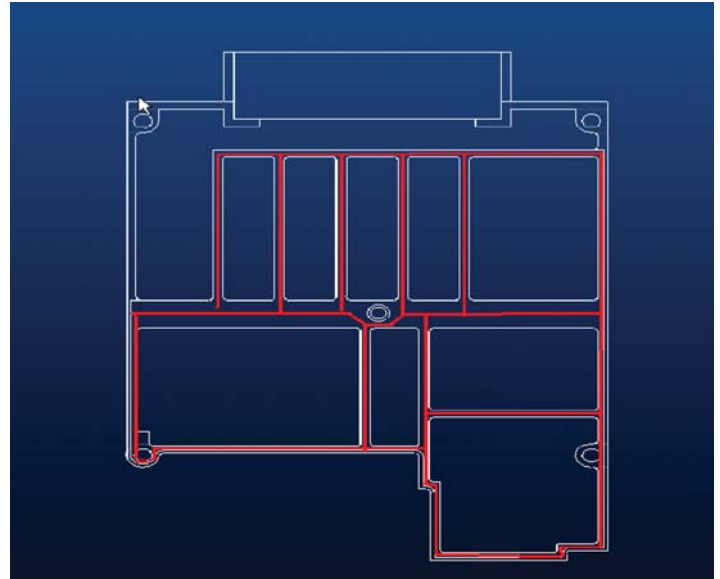
DESIGN CONSIDERATIONS

When optimizing a gasket shielding solution, consider the housing design as well as the EMI gasket performance.

Important considerations in the housing design include flatness, surface roughness, material type, rigidity, contact area, tolerance take-up, conductivity, fastener type, and fastener locations.

Key factors in an EMI gasket included softness, tolerance take-up, conductivity (DC resistance), and shielding effectiveness both before and after Accelerated Life Testing (ALT).

Gore application engineers can provide expert design assistance and rapid prototyping for your EMI shielding needs. Contact Gore for additional information.



Features and Benefits

- Good shielding effectiveness
- Excellent reliability through Accelerated Life Test (ALT)
- Flame Retardant (UL-94 V-0)
- Broad temperature range (–45°C – 120°C)
- Years of successful use worldwide



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THICKNESS OPTIONS

In.	mm
0.010	0.25
0.020	0.51
0.040	1.02
0.060	1.52
0.080	2.03
0.100	2.54
0.115	2.92

NOMINAL MATERIAL PROPERTIES

Hardness	(Shore A) 45
Density (gm/cc)	0.34
Operating Temperature Range (°C)	-45 – 120
Fire Safety Rating (UL94)	V-0

ELECTRICAL PROPERTIES

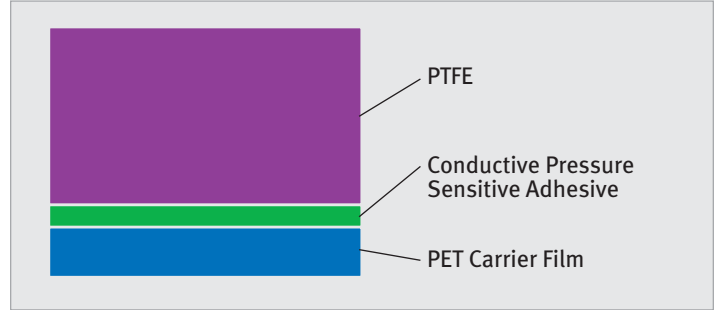
Volume Resistivity	1.5 ohm-cm @ 500psi, Ag electrodes
Shielding Effectiveness (with adhesive)	>50dB @1GHz (ARP 1705 Method)

ROHS STATUS

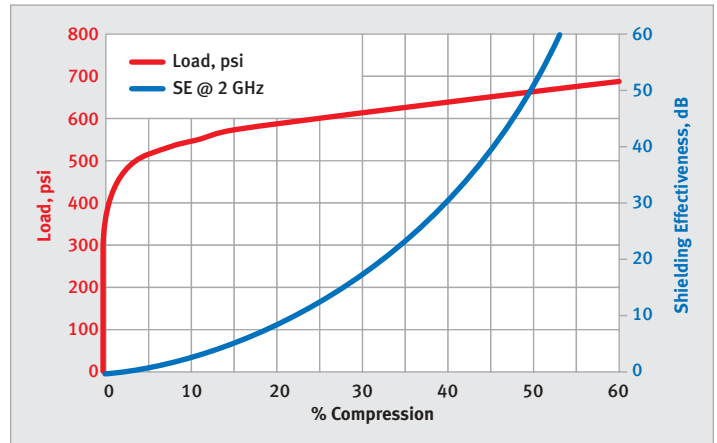
RoHS Material*	Pass/Fail
Lead (Pb) Content	Pass
Cadmium (Cd) Content	Pass
Hexavalent Chromium (Cr6) Content	Pass
Mercury (Hg) Content	Pass
Bromine Compounds	Pass

*W. L. Gore & Associates declares that we do not intentionally add substances listed in Directive 2002/95/EU to GORE-SHIELD® GS500 EMI Gasket Foam. Independent lab test have been performed and results are available upon request.

FIGURE 1



LOAD AND SHIELDING EFFECTIVENESS VS. % COMPRESSION GS500 WITH ADHESIVE



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