Gore-Shield®

GS8000 GROUNDING PADS

Soft and Highly Conductive

Summary

GORE-SHIELD® GS8000 Conductive Foam is ideal for applications such as grounding pads where conformability, high conductivity, and low compressive forces are required.

GORE-SHIELD® GS8000 Conductive Foam can be supplied as die-cut parts on rolls for high-volume assembly. This material is ideal for the cellular phone, PDA, and portable computing market.

GORE-SHIELD® GS8000 Conductive Foam consists of a nickel-plated, conductive polyurethane foam, a conductive pressure sensitive adhesive, a copper foil, another conductive pressure sensitive adhesive, and a PET carrier film (see Figure 1).

Applications

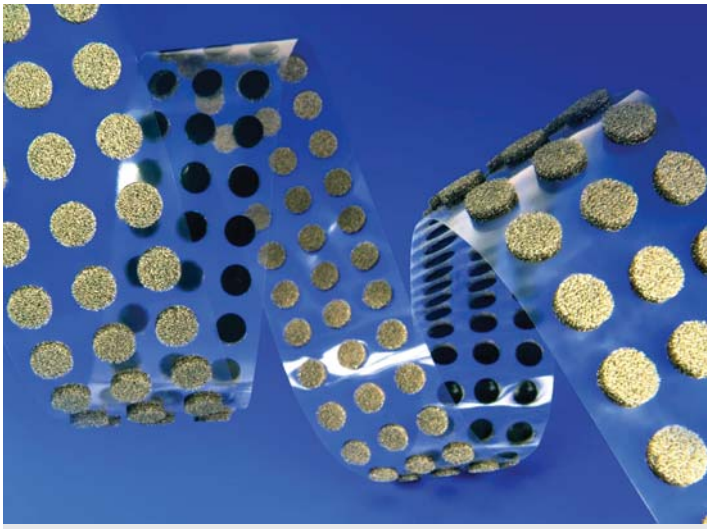
RF and static grounding for mobile phones, PDAs, portable computing, or other portable devices.

Design Considerations

When considering GORE-SHIELD® GS8000 Conductive Foam for a grounding pad application, it is important to understand the surfaces the pad will contact. If the pad will be adhered to the housing or cover, then surface flatness, roughness, material type, rigidity, tolerance take-up, and fastener locations must be considered.

Once the working height of the compressed pad is established, refer to Charts 1 and 2 to determine which thickness of GORE-SHIELD® GS8000 Conductive Foam is most suitable. Ideally, designers should strive for 50-75% compression to final stop to ensure consistent RF grounding across the face and through the grounding pad.

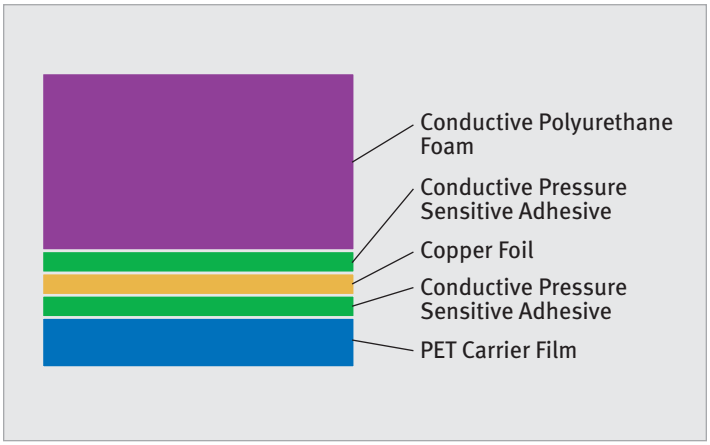
Gore application engineers can provide expert design assistance and rapid prototyping for your grounding pad solution needs. Please contact Gore for additional information.



Features and Benefits

- Low DC resistance
- Excellent reliability through Accelerated Life Testing (ALT)
- Excellent gap tolerance take-up
- Conformable and highly compressive with low force
- Compensates for materials with large tolerances

Figure 1



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Part List	Thickness	
GS8000-063	1.6mm (0.063 in.)	Measured Optically
GS8000-126	3.2mm (0.126 in.)	Measured Optically

Die-Cut Part Thickness		
GS8000-063	1.0mm (0.039 in.)	Measured Optically
GS8000-126	2.3mm (0.091 in.)	Measured Optically

Note: Die-cut part thickness will depend upon size, geometry, and density.

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

*W. L. Gore & Associates declares that we do not intentionally add substances listed in Directive 2002/95/EU to GORE-SHIELD® GS8000 Conductive Foam. Independent lab tests have been performed and results are available upon request.

Useful RF Grounding Pad Distances	Gap Distance
GS8000-063	0.30-0.9mm (0.012 – 0.035 in.)
GS8000-126	0.60-2.2mm (0.024 – 0.087 in.)

Electrical Properties (at 60% Compression)	
DC Resistance	Refer to Charts 1 and 2

Physical Properties (22°C at 50% R.H.)	
Compression Set	15%
% Recovery	85%

Note: Performance under various ALT (Accelerated Life Testing) conditions available upon request.

Temperature Limit	–45 to 85 deg. C

Adhesive Properties	Typical Perf.	Method
Adhesive Peel Test	>990 g per 25mm width	ART 1005
Adhesive Shear Test	0.031 MPa: 20 deg. C Stainless Steel	Gore Method

CHART 1 – GS8000-063

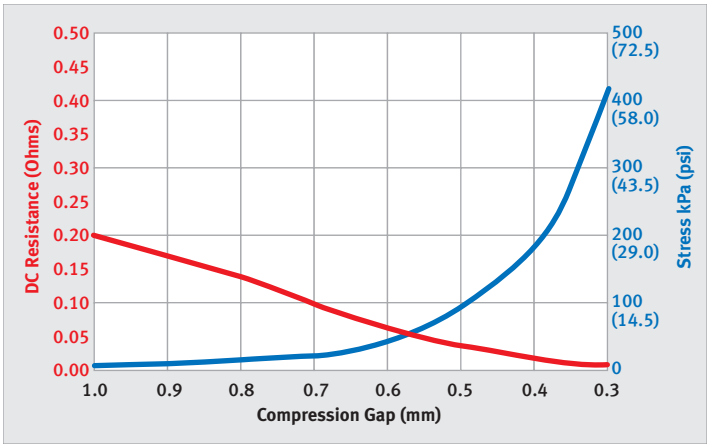
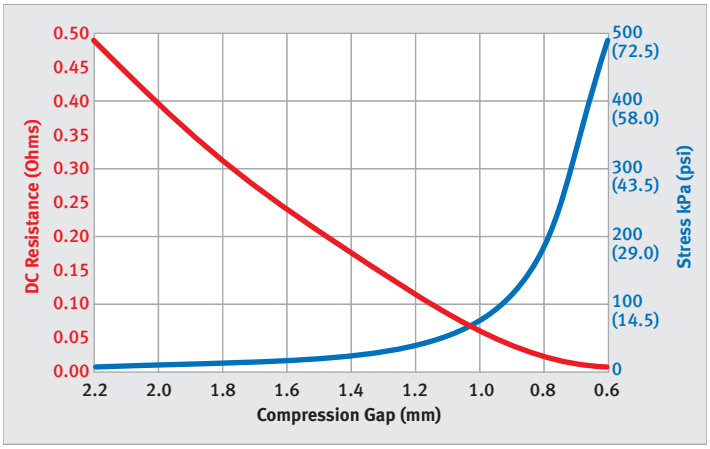


CHART 2 – GS8000-126



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Rev. 6-7-07
IK051222-01