EMERSON &CUMING MICROWAVE PRODUCTS

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ECCOSORB® GDS

High-Loss Silicone Rubber Sheet

Material Characteristics

- Thin, flexible, electrically non-conductive silicone rubber sheet
- Frequency range from 6 - 35 GHz
- Does not support fungal growth per MIL-STD-810E
- Impervious to moisture and can be subjected to moisture with no adverse effects
- Low out-gassing properties for space applications
- Can be cut and fitted to compound curves

Applications

- When bonded to a metal surface, ECCOSORB® GDS will significantly reduce the reflectivity of metal objects or structures due to the flow of microwave currents on that surface and will dampen cavity resonances in microwave modules.
- It can be applied to antenna elements, microwave dishes, the inner or outer surfaces of waveguides for isolation, attenuation, or modification of radiating patterns.
- When applied to side or even rear surfaces of certain objects, ECCOSORB® GDS will cause a significant reduction in "head on" reflectivity or backscattering.
- Although not intended as a specular absorber, it will reduce metal plate reflectivity by a few dB.

Instructions for Use

- ECCOSORB® GDS should be bonded to a metal surface for optimal *reflectivity* performance. If a metal surface is not available, it can be supplied upon request with an aluminum foil backing (ML) designated as GDS/ML

Availability

- ECCOSORB® GDS is available in sheets 0.030" x 12" x 12" (0.076 cm x 30.5 cm x 30.5 cm)
- Upon special request, ECCOSORB® GDS can be supplied in sheets up to 36" (914.4mm) in length
- It can be supplied with a Pressure Sensitive Adhesive (PSA). Product designation denoting ECCOSORB® GDS with a PSA is ECCOSORB® GDS/SS-6M
- ECCOSORB® GDS is available in other sizes and customer specified configurations and thicknesses upon request

Typical Properties

Electrical Properties shown taken at 8.6 GHz

Service Temperature	Cryogenic to 350 °F (177°C)
Fire Retardancy	UL-94 V1
Specific Gravity	3.6
Weight, Lbs/ft^2 (kg/m^2)	0.9 (4.39)
Volume Resistivity	>10^{11} ohm-cm
Hardness, Shore A	>70
%TML (with SS-6M)	0.2 (0.33)
%CVCM (with SS-6M)	0.081 (0.09)
Dielectric Constant ε'	13
Dielectric Loss Tangent, tan δ_d	0.2
Magnetic Permeability, μ'	1.7
Magnetic Loss Tangent, tan δ_m	0.78

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