

## 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 placed within a cavity ECCOSORB® GDS has proven to be very effective at dampening resonances due to the absorbers high permittivity and permeability
- 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
- 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

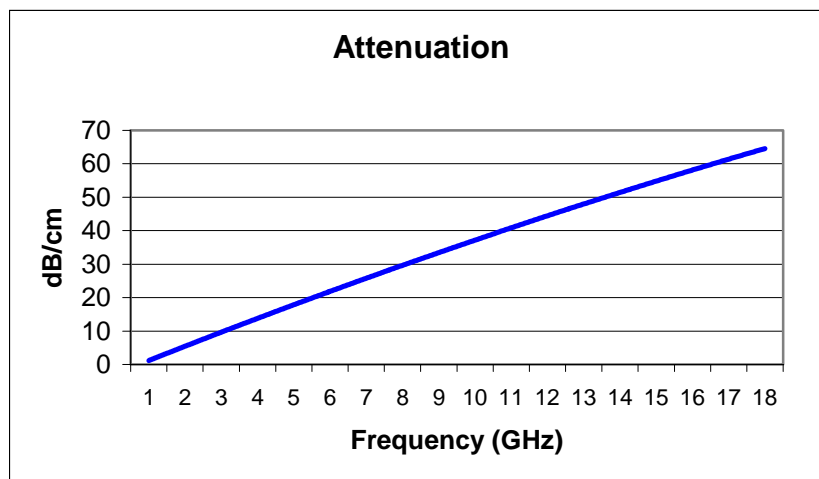
### Typical Properties

Electrical Properties taken at 8.6 GHz

Service Temperature	Cryogenic to 350°F (177°C)
Fire Retardancy	UL-94 V1
Specific Gravity (g/cc)	3.6
Volume Resistivity	>10 <sup>11</sup> ohm-cm
Hardness, Shore A	>70
%TML (with SS6M)	0.2 (0.33)
%CVCM (with SS6M)	0.081 (0.09)
Dielectric Constant $\epsilon'$	13
Dielectric Loss Tangent, $\tan \delta_d$	0.2
Magnetic Permeability, $\mu'$	1.7
Magnetic Loss Tangent, $\tan \delta_m$	0.78
Weight, lbs/ft <sup>2</sup> (kg/m <sup>2</sup> )	0.6 (2.92)
Weight, lbs/ft <sup>2</sup> (kg/m <sup>2</sup> ) with SS6M PSA	0.7 (3.41)

### 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/SS6M
- ECCOSORB® GDS is available in other sizes and customer specified configurations and thicknesses



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