

High-Loss, Thin, Elastomeric Microwave Absorber



HIGH-LOSS ELASTOMERIC ABSORBER

Eccosorb GDS is a thin, flexible, high-loss, magnetically loaded, electrically non-conductive silicone rubber sheet. It is designed for the frequency range from 6 GHz and above. The material is impervious to moisture and can be subjected to high altitudes, with no adverse effects. Being a silicone based absorber, it has low outgassing properties for space applications.

FEATURES AND BENEFITS

- High power performance
- Low outgassing properties

MARKETS

- Commercial Telecom
- Security and Defense
- Automotive and Industrial Electronics

SPECIFICATIONS

TYPICAL PROPERTIES	ECCOSORB GDS
Frequency Range (GHz)	≥ 6 GHz
Max Service Temperature °C (°F)	170 (338)
Hardness (Shore A)	>70
Volume Resistivity (ohm-cm)	> 10 ¹¹
Weight kg/m ² (lbs/ft ²)	2.9 (0.6)
Outgassing (%TML) (%CVCM)*	0.2/0.08

Data for design engineer guidance only. Observed performance varies in application. Engineers are reminded to test the material in application.

* Outgassing data per ASTM E595-07; criteria for acceptability is 1.00% TML and 0.10% CVCM.

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.

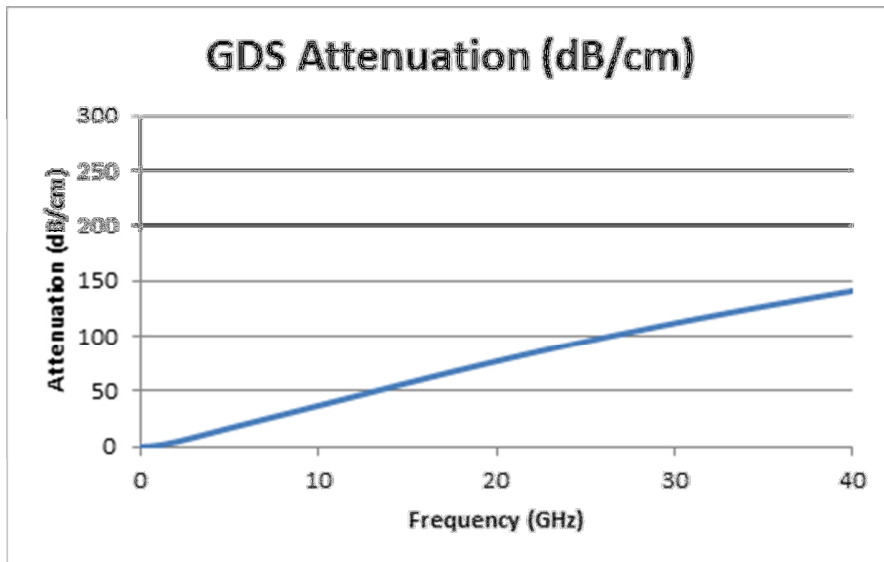
AVAILABILITY

- Standard sheets are 305 x 305x0.76mm (12”x12”x0.030”)
- Eccosorb GDS can be supplied with a Pressure Sensitive Adhesive.
- On special order, other sizes, thicknesses and customer specified configurations can be supplied.

INSTRUCTIONS FOR USE

- Eccosorb GDS is designed to function directly in front of a metallic surface.
- The material can be bonded by use of an RTV silicone based adhesive in conjunction with a suitable primer.
- To obtain a strong bond, the metallic surface should first be thoroughly cleaned with a degreasing solvent, apply a thin coat of primer to the dried surface and apply a RTV silicone adhesive.
- Eccosorb GDS can be readily cut with a sharp knife and template. It is a very flexible material and conforms to contoured surfaces.

Typical Attenuation Eccosorb GDS



RFP-DS-GDS 112315

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