Eccosorb® GDS FR

High-Loss, Thin, Elastomeric Microwave Absorber



HIGH-LOSS ELASTOMERIC ABSORBER

Eccosorb GDS FR is a thin,UL rated ,flexible, high-loss, magnetically loaded, electrically non-conductive silicone rubber sheet. It is designed for the frequency range from 18 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.

It s showing same performances as standard GDS with the additional features of being ULV0 rated.

FEATURES AND BENEFITS

- High power performance
- Low outgassing properties
- UL V0

MARKETS

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

SPECIFICATIONS

TYPICAL PROPERTIES	ECCOSORB GDS FR
Frequency Range (GHz)	≥ 18 GHz
Max Service Temperature °C (°F)	170 (338)
Hardness (Shore A)	>70
Volume Resistivity (ohm-cm)	$> 10^{11}$
Weight kg/m² (lbs/ft²)	2.9 (0.6)
Flammability rating	UL94 V0
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 FR 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 FR 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 FR 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 305 in thicknesses 0.5/0.76/1mm
- Eccosorb GDS FR can be supplied with a Pressure Sensitive Adhesive.
- On special order, other sizes, thicknesses and customer specified configurations can be supplied.

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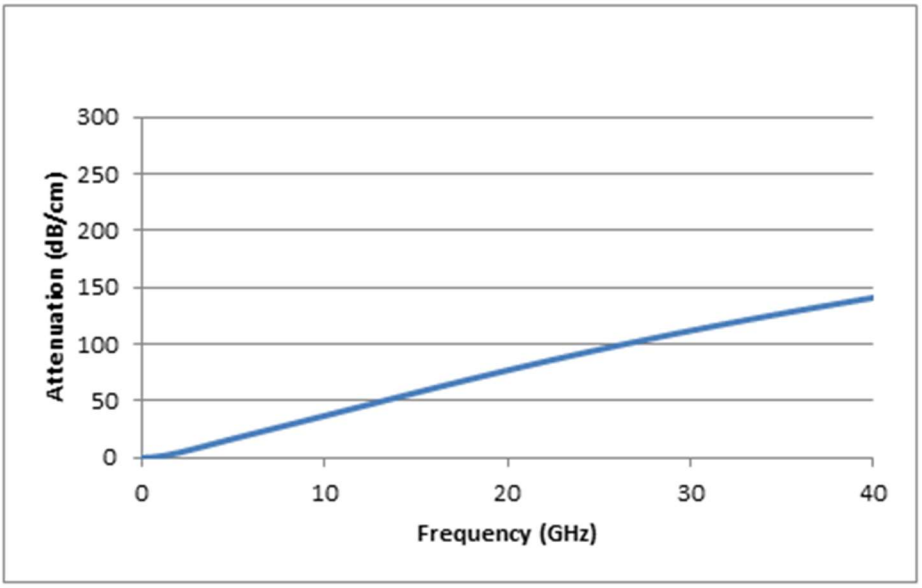
INSTRUCTIONS FOR USE

- Eccosorb GDS FR 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 FR 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 FR



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