

Thin, Flexible, Broadband Microwave Absorber

THIN FLEXIBLE BROADBAND ABSORBER



Eccosorb FGM is a thin, flexible, magnetically loaded, silicone absorber. Silicone absorbers have high service temperature capabilities and offer advantages for high power and low outgassing applications. They can be subjected to high altitudes, including space, with no adverse effects.

FEATURES AND BENEFITS

- High power performance
- High magnetic loss
- Low outgassing properties

MARKETS

- Commercial Telecom
- Security and Defense

SPECIFICATIONS

TYPICAL PROPERTIES	ECCOSORB FGM-40	ECCOSORB FGM-125
Frequency Range (GHz)	4 - 18	2 - 12
Max Service Temperature °C (°F)	170 (338)	170 (338)
Hardness (Shore A)	94	85
Weight kg/m ² (lb/ft ²)	5.0 (1.0)	10.8 (2.2)
Outgassing (%TML) (%CVCN)*	0.16/0.06	0.31/0.10

*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% CVCN.

APPLICATIONS

- Eccosorb FGM is used to line cavities in which antennas operate. It may be applied to surfaces to improve radar performance, reduce radar cross section or backscattering.
- Eccosorb FGM is effective even at high power in reducing specular reflections as well as surface currents due to the high magnetic loss properties.
- When bonded to a metal surface Eccosorb FGM 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.
- Applications include power amplifiers, oscillators, down/up converters and LNB's. It is also utilized to modify antenna patterns, cover antenna feed supports, line antenna caps to reduce reflections and improve the isolation of sensitive RF devices.

AVAILABILITY

- Standard sheets are 305 x 305mm (12"x12").
- Standard thicknesses are 1.0mm (.040") and 3.2mm (.125").
- On request Eccosorb FGM can be supplied with a Pressure Sensitive Adhesive.
- The product is also available in other sizes, thicknesses and customer specified configurations upon request.

INSTRUCTIONS FOR USE

- To obtain low reflectivity, the absorber must be mounted on a metal 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 be thoroughly cleaned with a degreasing solvent.
- Eccosorb FGM can be readily cut with a sharp knife and template.
It is a very flexible material and conforms to contoured surfaces.

