

ECCOSORB® MCS

THIN, FLEXIBLE, BROADBAND, MICROWAVE ABSORBER

Description:

Eccosorb MCS is a thin, flexible, high-loss, magnetically loaded, electrically non-conductive broadband absorber.

It is designed for the frequency range from 800 MHz to 18 GHz.

The material is impervious to moisture and can be subjected to outdoor environments and high altitudes, including space, with no adverse effects.

Being a silicone based absorber, it has low out-gassing properties for space applications.

Application:

When placed within a cavity, Eccosorb MCS has proven to be very effective at dampening resonances due to the absorbers high permittivity and permeability as well as high loss values, which in turn reduces the overall VSWR.

It is designed for the suppression of surface currents over a wide range of frequencies and can be used for the suppression of creeping waves and reduction of cavity resonances in microwave modules.

It is also useful in reducing RF coupling of antennas and microwave components.

Physical Properties:

Colour	grey
Dimensions (mm)	305 x 305
Nominal thickness (mm)	1
Weight (kg/m ²)	4.4
Tensile strength (MPa)	>3.5
Elongation (%)	>20
Thermal conductivity (cal cm/sec cm ² °C)	0.0028
Volume Resistivity (Ohm-cm)	2x10 ⁸
Relative Impedance	0.66 – 0.23
Dielectric Strength (kV/mm)	>0.8
Fire retardancy	UL-94 V1
%TML	0.3
%CVCM	0.05
Hardness (Shore A)	>80
Service Temp (°C)	cryogenic to 177



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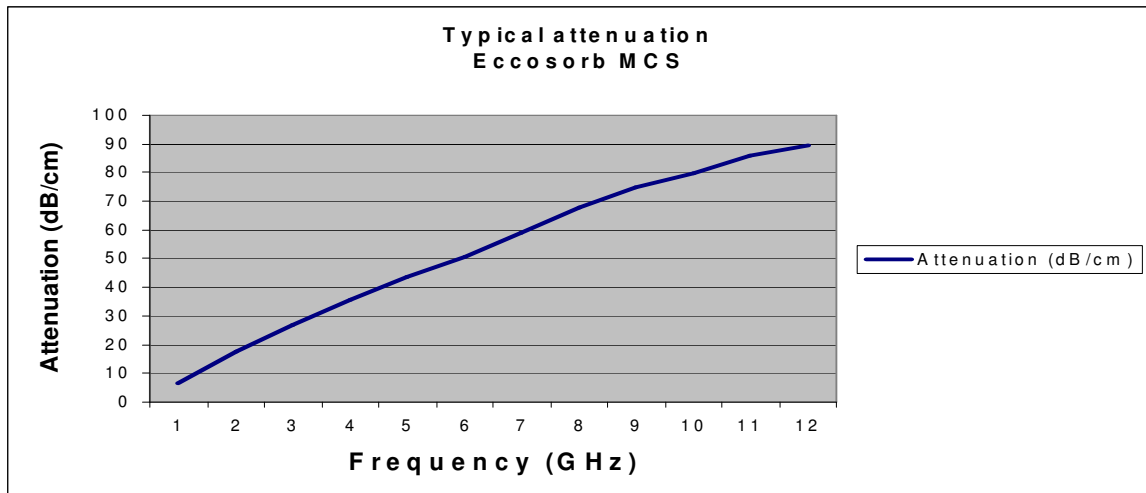
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Electromagnetic Properties:



Availability:

Eccosorb MCS is available in square sheets of 305 x 305 mm, standard thickness is 1mm. On special order other sizes, thicknesses and customer specified configurations can be supplied.

Instructions for use:

Eccosorb MCS is designed to function directly in front of a metallic surface.

If this is not the case, a metallic foil should first be bonded to the object.

As it is a homogeneous material, there is no distinction between its front and back face.

To obtain a strong bond of the absorber to the object, the metallic surface should be first thoroughly cleaned with a degreasing solvent.

The material can be bonded by use of an RTV silicone based adhesive in conjunction with a suitable primer.

Eccosorb MCS can be readily cut with a sharp knife and template.

It is a very flexible material and will conform to mild curvatures.



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Safety Considerations: It is recommended to consult the EMERSON & CUMING MICROWAVE PRODUCTS product literature, including material safety data sheets, prior to use EMERSON & CUMING MICROWAVE PRODUCTS products. These may be obtained from your local sales office.

WARRANTY: Values shown are based on testing of laboratory test specimens and represent data that falls within the normal range of properties of the material. These values are not intended for use in establishing maximum, minimum or ranges of values for specific action purposes. Any determination of the suitability of the material or any use contemplated by the user and the manner of such use is the sole responsibility of the user who must assure that the material as subsequently processed meets the needs of this particular product or use. We hope the information given here will be helpful. It is based on data and knowledge considered to be true and accurate and is offered for the user's consideration, investigation and verify action but we do not warrant the results to be obtained. Please read all statements, recommendations or suggestions in conjunction with our conditions of sale INCLUDING THOSE LIMITING WARRANTIES AND REMEDIES which apply to all goods supplied by us. We assume no responsibility for the use of these statements, recommendations or suggestions nor do we intend them as a recommendation for any use which would infringe any patent or copyright.

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