

# ECCOSORB® OCF

BROADBAND, CONVOLUTED, OPEN-CELL, FOAM ABSORBER

## Description :

Eccosorb OCF is a series of premium-grade tapered broadband absorbers. It has a convoluted shape similar to the Eccosorb CV material, but is made from a much more open-cell foam material. This open structure allows the piece to be used at high humidity although long term exposure to water and UV should be avoided.

For indoor higher power requirements, cooling air can be circulated through the foam structure, either by natural convection or by fan, to keep the temperature of the piece down.

Because of the rounded convolutions and lack of sharp corners and tips, Eccosorb OCF is the preferred absorber for mm wave frequencies and for grazing incidence angles out to 60° off-normal.

## Application:

- Absorbing collars (shrouds) around the edges of high performance antennas
- MM-wave applications
- Small test boxes

## Physical Properties :

	OCF
Standard colour	White
Base size (cm)	61X61
Max. Service Temperature	90°C
Power handling with unimpeded airflow	8 kW/m <sup>2</sup>

## Nominal dimensions of Eccosorb OCF :

Grade	Total height (cm)
OCF-3	7.5
OCF-4	10
OCF-6	15



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## Electromagnetic Properties :

The microwave absorbing properties of Eccosorb OCF are virtually the same as those of Eccosorb CV. The table below gives the specified reflectivity values, showing the frequency at which a particular reflectivity can be expected for each grade. Just as with Eccosorb CV, a reflectivity of -40 dB can be expected at 94 GHz. There is little degradation of the reflectivity for incidence angles as wide as 60° off-normal incidence.

LOW FREQUENCY LIMIT (IN GHz) OF INDICATED REFLECTIVITY				
GRADE	-20 dB	-30 dB	-40 dB	-50 dB
OCF-3	3	6	9	25
OCF-4	2.5	5	8	25
OCF-6	1.5	3	6	25

## Availability :

Eccosorb OCF is available in standard piece sizes of 61 cm x 61 cm, in three grades having thicknesses of 7.5 cm, 10 cm and 15 cm. The thickness determines primarily the low frequency end of performance, all grades have similar performance at millimetre wave frequencies

## Instructions for use :

Eccosorb OCF can be bonded to structures using a contact adhesive such as Eccostock Adhesive 13111. In this case, several coatings of the adhesive should be applied to the back surface of the absorber and be allowed to dry, to create a solid back surface.

It is preferred to use mechanical means to supplement the adhesive, impaling the piece on plastic pins or hooks is particularly effective.

The curved absorber tips should be pointed in the direction of the transmit signal.



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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 specification 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 verification 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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