

# ECCOSORB<sup>®</sup> AN

FLEXIBLE FOAM SHEET BROADBAND MICROWAVE ABSORBER

## Description :

Eccosorb AN is a lightweight, flexible, foam sheet broadband microwave absorber. It is available in 6 standard grades, depending upon the lowest desired frequency of operation, starting from 600 MHz..

Eccosorb AN is designed to reflect less than -17 dB of normal incident energy above specified frequencies and relative to a metal plate.

## Application :

Eccosorb AN is being used for reducing crosstalk between adjacent antennas, shrouding antennas to improve the antenna patterns and undesired back lobes, as well as selective shadowing of parts of a target for RCS measurements.

It can also be used for shadowing posts and supports in anechoic chambers, and as absorbing blanket for testing radar systems without harm to personnel.

For isolation of components or antennas by means of insertion loss, it can be used without a metal backing.

## Physical Properties :

	AN
Front surface colour	White
Back surface colour	Black
Max. Service Temperature(°C )	90
Power Handling ( W/cm <sup>2</sup> )	0.15
Fire Retardancy	UL94-HBF

## Nominal dimensions and weight of Eccosorb AN :

Grade	Total Thickness (cm)	Nominal weight (kg/pc)
AN-72	0.6	0.25
AN-73	1.0	0.50
AN-74	1.9	0.70
AN-75	2.9	0.80
AN-77	5.7	1.50
AN-79	11.4	2.95

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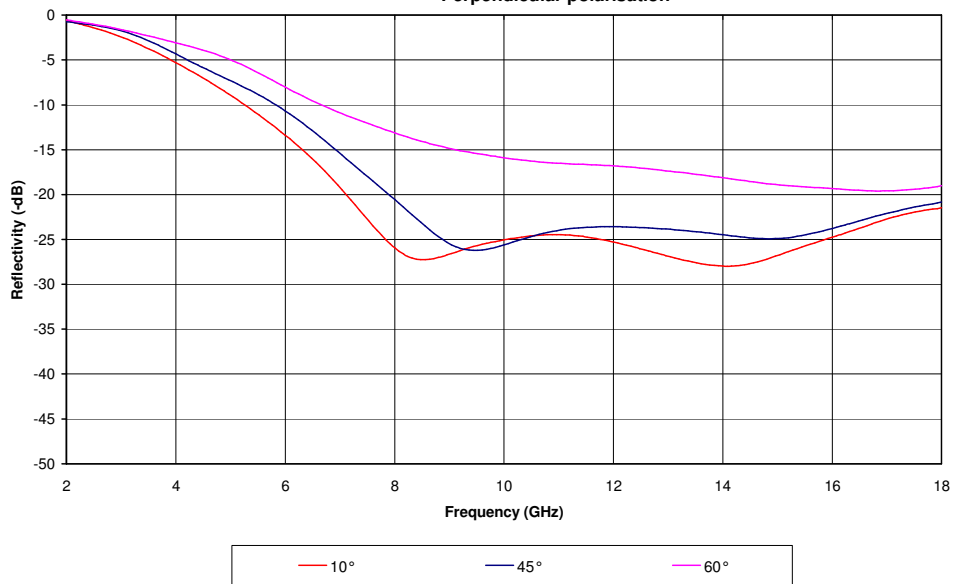
## Electromagnetic properties :

GRADE	Reflectivity Range (-17 dB)
AN-72	20 GHz
AN-73	>7.5 GHz
AN-74	>3.5 GHz
AN-75	>2.4 GHz
AN-77	>1.2 GHz
AN-79	>600 MHz

Typical reflectivity at various angles of incidence

Eccosorb AN-73

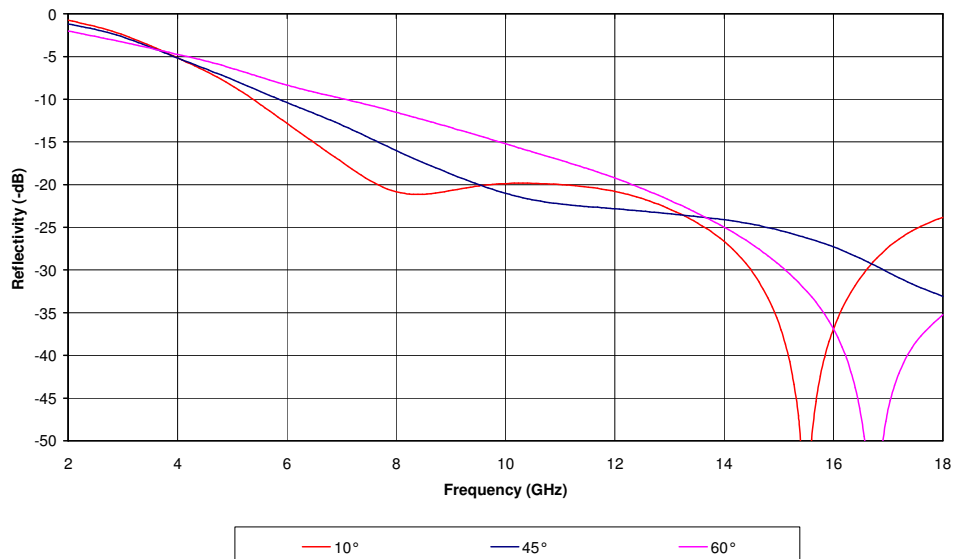
Perpendicular polarisation



Typical reflectivity at various angles of incidence

Eccosorb AN-73

Parallel polarisation



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## Availability :

Eccosorb AN is available in six standard thicknesses depending upon the lowest desired frequency of operation. Standard sheets are 610 mm x 610 mm.

Eccosorb AN is available upon special order in other sizes and customer specified configurations, incorporating mitre cuts or attachment to metal parts.

It can be manufactured, on special order, on a mandrel, to take a contoured shape.

## Related products with improved outdoor properties :

Eccosorb AN is not waterproof and will not operate correctly when wet. Therefore the material is not recommended for outdoor use. However since there is no washout, Eccosorb AN will still function properly when dried.

For high humidity to moderately wet environments, sealed versions of Eccosorb AN are available.

They are essentially the same material as Eccosorb AN but the absorber is sealed to provide improved outdoor properties.

The available types are :

Eccosorb AN-xx-W : sealed with neoprene coated nylon fabric, colour olive green.

Eccosorb AN-xx-WPC : sealed with a poly-urethane coating, different colours available on request.

Eccosorb AN-xx-WPVC : sealed with a PVC plastic, different colours are available on request and can be provided with eye-lets for fixing.

Reflectivity performance is similar to the standard Eccosorb AN product.

## Instructions for use :

To obtain low reflectivity, the absorbers must be mounted on a metal surface. If a metal surface is not available, Eccosorb AN can be supplied metal backed with aluminium foil (ML).

For correct operation Eccosorb AN must have the white (front) face towards the signal to be attenuated.

Layering of multiple pieces or slicing off part of the thickness will degrade the overall performance.

Eccosorb AN can be securely bonded to itself or to other materials such as metal, wood, and common plastic composites. The recommended adhesive is Eccostock Adhesive 13111.

It can be readily cut on a band saw, with scissors, or a sharp knife.



**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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