ECCOSORB®AN

Flexible Foam Sheet Broadband Microwave Absorber

FLEXIBLE FOAM SHEET BROADBAND MICROWAVE ABSORBER:

Eccosorb AN is a lightweight, flexible, polyurethane foam sheet broadband microwave absorber. It is designed to reflect less than -17 dB of normal incident energy above specified frequencies and relative to a metal plate.

FEATURES AND BENEFITS

- Carbon loaded, multilayer absorber
- Broadband free space absorber
- Low weight
- RoHS/Reach compliant

MARKETS

- Commercial Telecom
- Security and Defense
- Test & Measurement

SPECIFICATIONS

TYPICAL PROPERTIES	ECCOSORB AN
Front surface color (facing oncoming EMI)	White
Back surface color	Black
Max. Service Temperature °C (°F)	90 (194)
Power Handling, W/cm²	0.15
Fire Retardancy	UL94-HBF

Data for design engineer guidance only. Observed performance varies in application. Engineers are reminded to test the material in application.

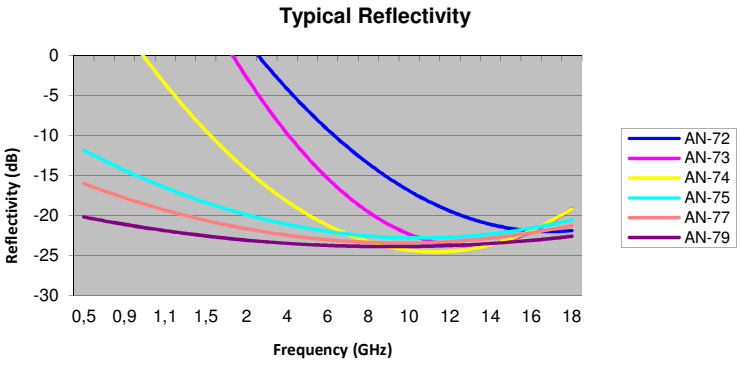
APPLICATIONS

- Eccosorb AN is commonly used for the lining of small test chambers to reduce reflections.
- Eccosorb AN is being used for reducing crosstalk between adjacent antennas, shrouding antennas to improve the antenna patterns and undesired backlobes, as well as selective shadowing of parts of a target for RCS measurements.
- Shadowing of posts and supports in anechoic chambers, and as absorbing blankets 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.

AVAILABILITY

- Eccosorb AN is available in six standard grades depending upon the lowest desired frequency of operation, starting from 600 MHz.
- Standard sheets are 61 cm X 61 cm (24” x 24”)
- Eccosorb AN is available in other sizes and customer specified configurations, incorporating miter cuts or attachment to metal parts.
- It can be manufactured, on special order, on a mandrel, to take a contoured shape.

Eccosorb® AN



	Reflectivity range (>17 dB)	Nominal Thickness cm (inch)	Nominal Weight kg/piece (lb/piece)
AN-72	>20 GHz	0.6 (0.24)	0.25 (0.6)
AN-73	>7.5 GHz	1.0 (0.39)	0.50 (1.1)
AN-74	>3.5 GHz	1.9 (0.75)	0.70 (1.5)
AN-75	>2.4 GHz	2.9 (1.14)	0.80 (1.8)
AN-77	>1.2 GHz	5.7 (2.24)	1.50 (3.3)
AN-79	>600 MHz	11.4 (4.49)	2.95 (6.5)

ENVIRONMENTAL PROPERTIES

- Eccosorb AN is not waterproof and will not operate correctly when wet. Since there is no washout, it will function as expected after being allowed to dry.
- A special CERSEAL coating to prevent moisture uptake in high humidity to moderately wet environments is available on special request.
- 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, color olive green.
  Eccosorb AN-xx-WPC : sealed with a poly-urethane coating, different colors available on request
  Eccosorb AN-xx-WPVC :sealed with a PVC plastic, different colors 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 aluminum 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.
- Reflectivity performance also degrades for off-normal bistatic incidence and at different rates for different polarizations.
- Eccosorb AN can be securely bonded to itself or to other materials such as metal, wood, and common plastic composites. Our specific Eccostock® foam adhesive is recommended.