

## Lightweight, Open-cell, Broadband Microwave Absorber

### LIGHTWEIGHT BROADBAND FOAM ABSORBER



Eccosorb HR is a lightweight, flexible, flat-sheet, broadband absorber based on a reticulated (open-cell) polyurethane foam material impregnated with carbon black dispersions with controlled conductivity. Automated impregnation methods are used in order to obtain a gradient loading of the absorber.

### FEATURES AND BENEFITS

- Lightweight
- Open-cell
- Different thicknesses, different frequencies
- High free space reflectivity performance

### MARKETS

- Commercial Telecom
- Parabolic Antennas
- Security and Defense
- Test and Measurement

### SPECIFICATIONS

TYPICAL PROPERTIES	ECCOSORB HR
Frequency Range (GHz)	5 to 90
Max. Service Temperature °C (°F)	90 (194)
Density kg/m <sup>3</sup> (lb/ft <sup>3</sup> )	45 (2.8)
Tensile Strength (kPa)	70
Elongation (%)	170

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

### APPLICATIONS

- Lining of antenna shrouds for low side-lobe reflector antennas.
- Decoupling of adjacent antennas and array elements.
- Camouflaging and interference suppression applications.
- Masking of reflecting structures i.e. masts in anechoic chambers.

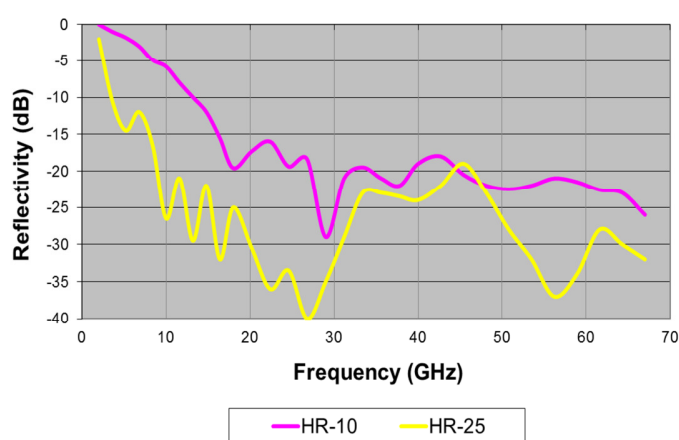
### AVAILABILITY

- Standard sheets are 610mm x 610mm (24"x24").
- The material is available in 3 standard thicknesses :  
Eccosorb HR-10 - nominal thickness 10mm  
Eccosorb HR-15 - nominal thickness 15mm  
Eccosorb HR-25 - nominal thickness 25mm
- Other sizes and customer specified configurations can be delivered upon request.

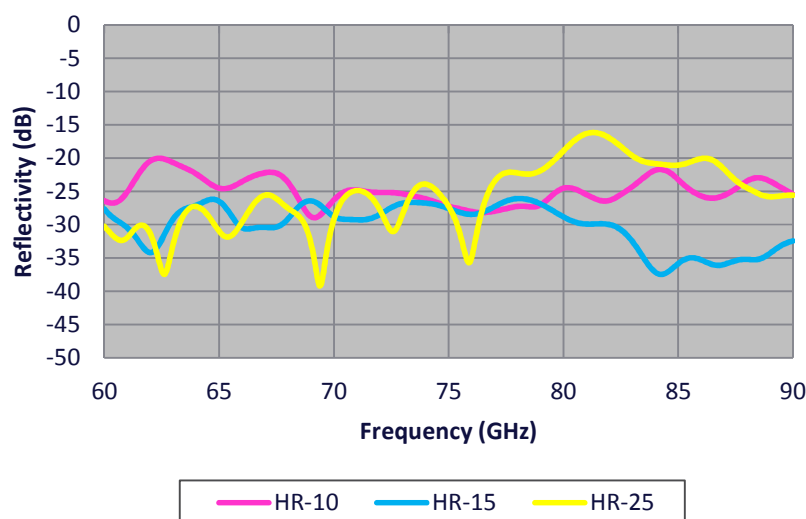
## INSTRUCTIONS FOR USE

- As the material is a gradient loaded absorber, the back side of the absorber is marked and this side should be bonded to the surface. The front surface should face the incident electromagnetic energy for proper performance.
- For optimal performance, Eccosorb HR should be bonded to a metal surface. If a metal surface is not available, the absorber can be supplied with an aluminium foil backing (ML) designated as HR-XX-ML.
- Our specific Eccostock® foam adhesive is recommended to bond Eccosorb HR.

### HR Reflectivity



### HR Reflectivity



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