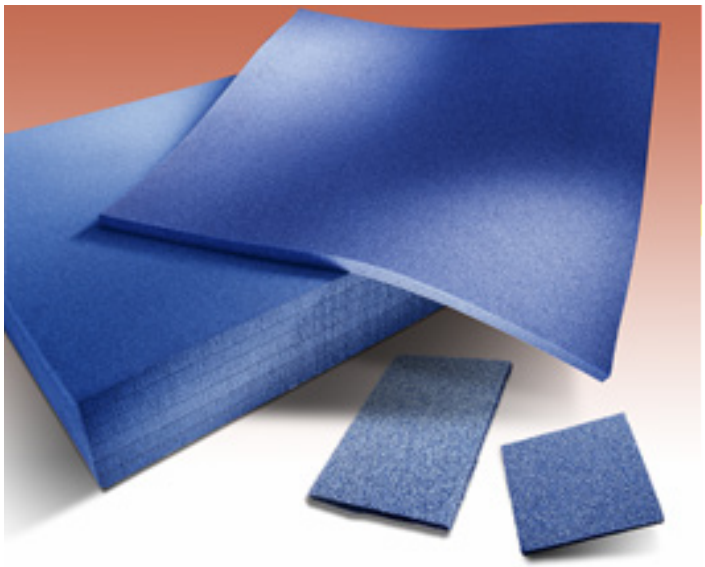
Technical Data Sheet

Engineered Materials

C-RAM™ LF & LF-W

Flexible foam sheet broadband microwave absorber



Description

C-RAM™ LF is a series of lightweight, flexible, multi-layer polyurethane broadband microwave absorbers.

Designed to provide typically -20 dB of reflectivity reduction in a frequency range dependent upon grade.

Material is carbon loaded and therefore, electrically conductive. Material is also fire retardant.

Availability

Standard sheets are 24” x 24” (610 mm x 610 mm).
C-RAM™ LF can be supplied in other sizes or per customer specified configurations.

C-RAM™ LF can be supplied with a rubber coating (-RC) to prevent moisture uptake in high humidity environments, or it can be wrapped in a weatherproof olive green neoprene fabric tarp (-W) for outdoor use.

For long term sun and rain exposure, the material can be wrapped in a white colored Hypalon fabric (-HCN).

Applications

Lining of test chambers to reduce reflections.

Reduce crosstalk between adjacent antennas, shrouding antennas to improve the antenna patterns and undesired backlobes.

Isolation of components or antennas by means of insertion loss when used without a metal backing.

Free space reflectivity reduction.

Reduce reflections inside test boxes.

Typical properties

Frequency range	≥ 600 MHz
Service temperature, °F (°C)	-40 to +250 (-40 to +121)
Thermal conductivity	6.5 x 10-5 cal-cm/sec-cm^2 - °C
Color	Black (back), painted blue on front and sides

Instructions for use

C-RAM™ LF sheets can be bonded to many surfaces using a one part neoprene contact adhesive.

The adhesive can be sprayed or brushed onto both the substrate and the back of the absorber panel. When the adhesive is still tacky, but not wet to the touch, the panel is pressed into place for an immediate and permanent fit.

For best performance, the absorber must be mounted on a metal surface. If a metal surface is not available, C-RAM™ LF can be supplied with a metal lining (-ML).

For correct operation, C-RAM™ LF must have the blue (front) face towards the incoming signal.

It’s not recommended to stack the C-RAM™ LF material and also not to remove any layers as this will degrade the overall performance.

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Grade	Thickness, mm (in)	Weight, kg (lb)	Density g/cm³	Frequency range of use
LF-72	6.4 (0.25")	0.25 (0.55)	0.10	-20dB 18 GHz – 40 GHz
LF-73	9.5 (0.38")	0.40 (0.90)	0.10	-20dB 7.5 GHz – 40 GHz
LF-74	19.1 (0.75")	0.70 (1.55)	0.10	-20dB 3.5 GHz – 40 GHz
LF-75	28.6 (1.13")	0.80 (1.75)	0.08	-20dB 2.5 GHz – 40 GHz
LF-77	57.2 (2.25")	1.50 (3.30)	0.07	-20dB 1.3 GHz – 40 GHz
LF-79	114.3 (4.5")	2.95 (6.50)	0.07	-20dB 0.6 GHz – 40 GHz

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