

## TECHNICAL BULLETIN 390-8

### C-RAM RFC and RFA

#### HIGH PERFORMANCE CONVOLUTED RF ABSORBERS

C-RAM RFC is a series of RF absorbers optimized for performance at frequencies above 10 GHz. Made from a very uniform, open-cell, small pore urethane foam, C-RAM RFC works well up to and above 50 GHz, and meets the fire retardancy requirements of NRL 8093. The material is intended primarily for indoor use in anechoic chambers and other test facilities.

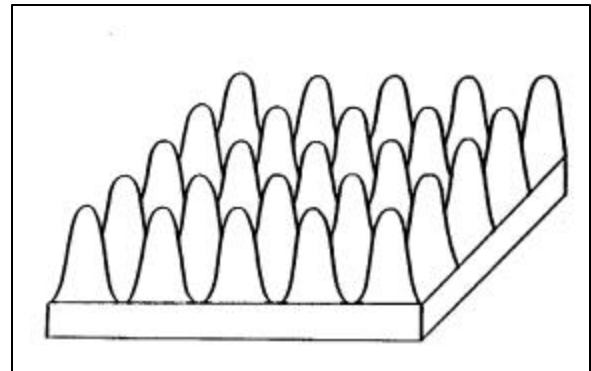
C-RAM RFC is very similar in construction and performance to the analogous convoluted absorber, C-RAM FAC. C-RAM RFC would be used when air flow through the piece is required, such as over an air duct, or for cooling air in a high power application.

C-RAM RFA is a similar convoluted absorber available in various thickness grades. It is made from a large-pore open-cell urethane foam (approx 15 pores/inch). This open cell structure makes C-RAM RFA ideal for outdoor applications, where rain can drain quickly through the piece, and residual moisture can evaporate quickly.

For optimum resistance to moisture, C-RAM RFA uses a different fire retardancy mechanism. While it is self-extinguishing, this material is not rated to NRL 8093 standards.

#### METHOD OF APPLICATION

Both C-RAM RFC and RFA are attached to walls and ceilings using a contact adhesive, such as C-BOND 287. When bonding over a



vent or air duct, the absorber should be cut oversized, and be bonded only around the edges to the wall.

#### AVAILABILITY

C-RAM RFC and RFA are each available in three thickness grades, as specified in the tables below. Pieces are available in a standard 24 in x 24 in (610 x 610 mm) base size, although other dimensions can be made on special order.

Both materials are generally supplied with a light blue surface coating, but as with C-RAM FAC, when the intended use is above 30 GHz, it is recommended to specify the material unpainted.

## TYPICAL DIMENSIONS AND REFLECTIVITIES OF C-RAM RFC

----- REFLECTIVITY AT FREQ., IN dB -----

Grade	Height	Weight	10 GHz	20 GHz	30GHz	50 GHz
<b>RFC-1.5</b>	1.5 in 38mm	0.8 lb .35kg	22	30	40	40
<b>RFC-3.0</b>	3.0 in 76mm	1.5 lb .70kg	30	40	45	45
<b>RFC-4.5</b>	4.5 in 115mm	2.3 lb 1.0kg	35	40	45	45

## TYPICAL DIMENSIONS AND REFLECTIVITIES OF C-RAM RFA

----- REFLECTIVITY AT FREQ., IN dB -----

Grade	Height	Weight	2 GHz	5 GHz	10 GHz	15 GHz	20 GHz
<b>RFA-075</b>	0.75 in 19mm	0.5 lb .25kg		12	15	17	18
<b>RFA-175</b>	1.75 in 45mm	0.8 lb .35kg	12	18	25	28	30
<b>RFA-375</b>	3.75 in 95mm	1.5 lb .70kg	25	32	37	40	40

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