

CUMING MICROWAVE

Technical Bulletin 390-2

C-RAM SFC WEDGE HIGH PERFORMANCE WEDGE SHAPED ABSORBERS

RoHS
Compliant

C-RAM SFC-WEDGE is a series of high performance broadband absorbing materials of wedge configuration. SFC-WEDGE complements the pyramidal SFC product and is made using the same process and materials. SFC-WEDGE has the same fire retardancy compliance with NRL-8093 Tests 1, 2 and 3.

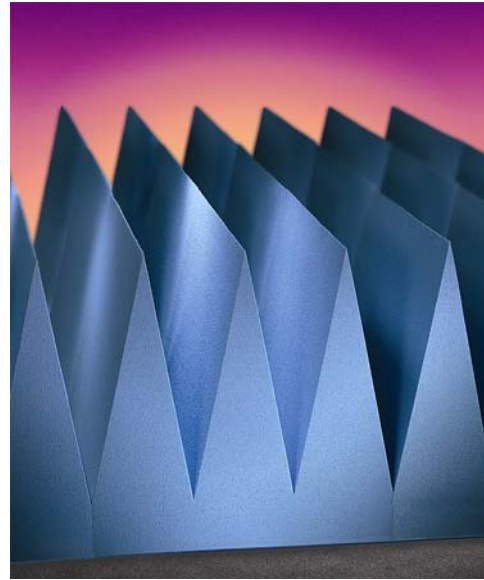
C-RAM SFC-WEDGE is designed for use in special applications where energy is directed at very wide angles, as in the case of energy propagation down the taper of a tapered chamber, and on chamber side walls, ceiling and floor in very long and narrow chambers. The wedge design eliminates backscatter at these high incidence angles.

An added feature of SFC-WEDGE is that the reflectivity performance at near normal incidence angles is close to that of the pyramidal SFC product, but due to the wedge geometry, the product is polarization sensitive. The performance versus frequency is listed next page. The material will perform as the pyramidal material of same height "H" but with reflectivity values that are 2 to 4dB less. This 2 to 4dB difference is largely due to the polarization of the wedge geometry.

TYPICAL PROPERTIES

Dimensions and weights of the various grades of SFC WEDGE are given in Table 1 below. Typical reflectivity of the various grades is given in Table 2 next page.

Material is black throughout, surfaces are painted blue. Standard method of attachment is the same as for C-RAM SFC pyramidal grades.



AVAILABILITY

C-RAM SFC-WEDGE is available in six standard grades, 4, 6, 8, 12, 18, and 24 inches tall. Grades larger than 24 inches are available as special order.

All grades have a 24 inch x 48 inch (610 x 1220 mm) base size, with wedges running along the 48 inch dimension. Parts can be factory cut to special shapes and miters. In addition, pre-designed tapered chamber kits are available with all necessary pre-cuts.

Specify the part as C-RAM SFC-xxW, where xx is the height in inches, for example, SFC-18W.

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TABLE 1 -- SFC WEDGE PHYSICAL DATA

Grade	Base Dimension	Height	Wedge Rows per piece	Weight
SFC-4 WEDGE	24 x 48 in.	4 in.	12	5.0 lbs.
SFC-6 WEDGE	24 x 48 in.	6 in.	10	8.0 lbs.
SFC-8 WEDGE	24 x 48 in.	8 in.	8	10 lbs.
SFC-12 WEDGE	24 x 48 in.	12 in.	6	13 lbs.
SFC-18 WEDGE	24 x 48 in.	18 in.	4	16 lbs.
SFC-24 WEDGE	24 x 48 in.	24 in.	3	22 lbs.
SFC-36 WEDGE	24 x 48 in.	36 in.	2	30 lbs.
SFC-48 WEDGE	24 x 48 in.	48 in.	2	45 lbs.

TABLE 2 -- TYPICAL REFLECTIVITY AT NORMAL INCIDENCE, dB

Frequency (GHz)	0.3	.5	1	3	6	10	18	36	50
SFC-4 WEDGE				27	32	37	45	45	45
SFC-6 WEDGE				30	37	40	45	45	45
SFC-8 WEDGE			30	35	45	47	47	47	47
SFC-12 WEDGE			35	37	45	47	47	47	47
SFC-18 WEDGE		30	35	45	47	47	47	47	47
SFC-24 WEDGE	30	35	40	45	48	50	50	50	50
SFC-36 WEDGE	35	38	42	45	48	50	50	50	50
SFC-48 WEDGE	35	40	46	48	50	50	50	50	50

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