

TECHNICAL BULLETIN 390-2

C-RAM SFC WEDGE

HIGH PERFORMANCE WEDGE SHAPED ABSORBERS

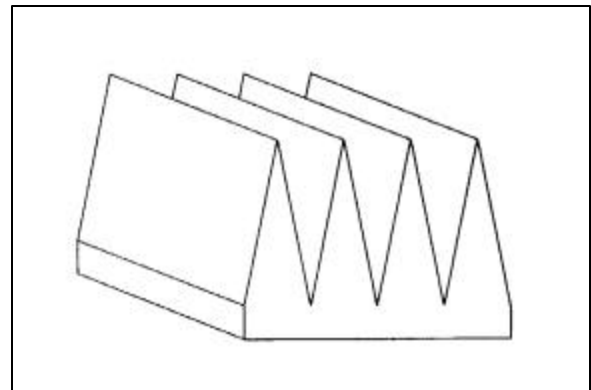
C-RAM SFC-WEDGE is a series of high performance broadband absorbing materials of wedge configuration. SFC-WEDGE complements the pyramidal SFC product, and is made using the same process and materials. SFC-WEDGE therefore possesses the same desirable properties, including fire retardancy compliance with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

C-RAM SFC-WEDGE is primarily designed for use in special applications where energy is directed in a desired path, as in the case of energy propagation down the taper of a tapered chamber, and on chamber side walls, ceiling and floor where energy is guided to a pyramidal absorber on the back wall. The wedge design eliminates backscatter at these high incidence angles.

An added feature 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 below, 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 below.

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

AVAILABILITY

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

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

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TABLE 1 -- SFC WEDGE PHYSICAL DATA

Grade	Base Dimension	Height	Wedge Rows per piece	Weight
SFC-6 WEDGE	24 x 24 in.	6 in.	10	4.3 lbs.
SFC-8 WEDGE	24 x 24 in.	8 in.	8	5.3 lbs.
SFC-12 WEDGE	24 x 24 in.	12 in.	6	6.5 lbs.
SFC-18 WEDGE	24 x 24 in.	18 in.	4	8 lbs.

TABLE 2 -- TYPICAL REFLECTIVITY AT NORMAL INCIDENCE, dB

Frequency in GHz	.5	1	3	6	10	18	36	50
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

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