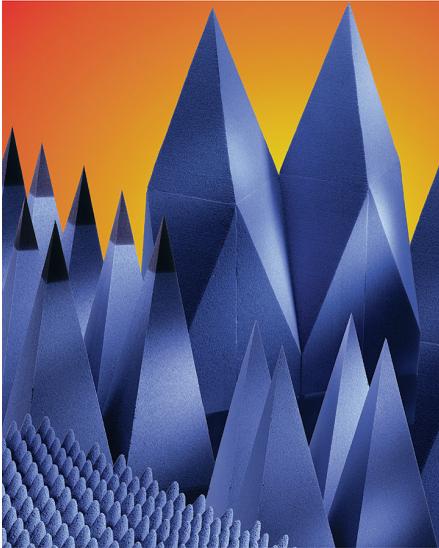


# Cuming Microwave

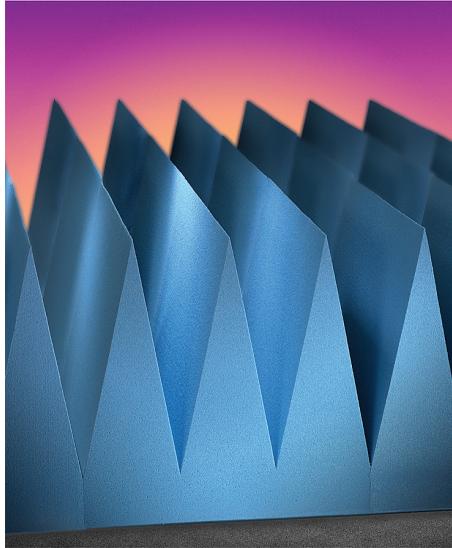
Anechoic chambers and RF  
pyramidal absorbers



**C-RAM SFC**  
High performance pyramidal absorber



**C-RAM SFC wedge**  
Wide incidence angle absorber



**C-RAM SFC-EM**  
MIL-STD-461/462 chambers



C-RAM SFC and C-RAM SFC Wedge Comprise a full product line of premium-grade, pyramidal and wedge-shaped absorbers for anechoic chambers and laboratory test setup.

A full complement of matching vent absorbers: C-RAM EVA and walkway absorbers C-RAM SFC Walk Way are available.

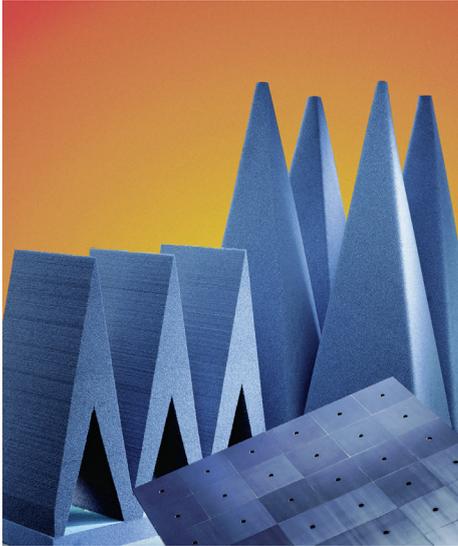
C-RAM SFC and associated products cover the frequency range from low MHz through millimeter wave.

The SFC-EM products are optimized for low frequency performance. C-RAM SFC-EM are truncated to save space and yield a rugged product. Ideal for MIL SPEC 462 – C, D, and E and CISPR-25 chambers. Also a low cost solution for EN 1000-4-3 and derivative specifications from 80 MHz through 40 GHz.

Product	Function	Operating frequency	Thickness	Benefits
C-RAM SFC	High performance pyramidal absorber	100 MHz & up	2.0" to 72"	Broadband high performance pyramidal absorber
C-RAM SFC wedge	High performance wedge absorber	100 MHz & up	6.0" to 24"	Broadband wedge absorber
C-RAM SFC-EM	Truncated pyramidal EMC absorber	70 MHz & up	12" and 36"	Space saving low profile and rugged
C-RAM FT	Low frequency ferrite absorber	20 MHz to 1.5 GHz	0.25"	Ceramic (ferrite) tile absorber
C-RAM HFP	Low frequency hybrid absorber	20 MHz to 40 GHz	12" through 48"	Very broadband EMC absorber
C-RAM FAC	High performance convoluted absorber	2 GHz & up	0.75" to 4.0"	High performance high frequency
C-RAM EVA	Open cell absorber for outdoor & ventilation applications	100 MHz & up	2.0" to 72"	High power & ventilation applications outdoor pyramidal
C-RAM CFC	Clean room absorbers high performance	100 MHz to 30 GHz	4.0" to 36"	Clean room environment

### C-RAM FT & HFP

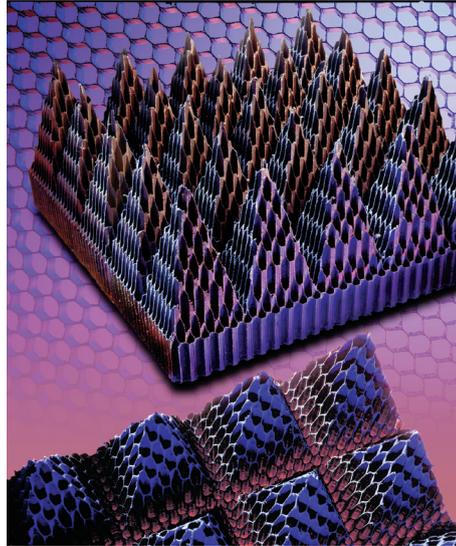
Low frequency compliance chambers



A full product line for treatment of EMC test chambers— both for emissions testing and susceptibility testing. C-RAM FT, ceramic ferrite tiles and C-RAM HFP, hollow impedance-matched hybrid absorbers for 26 MHz through 40 GHz performance, meeting all the prevailing U.S. and European specifications.

### C-RAM SFC-HC

High power handling absorber



A product line of pyramidal-shaped, high-power absorbers, based on a fiber-reinforced, phenolic honeycomb structure and phenolic binder of the lossy coating.

Power ratings of 10 W/in<sup>2</sup> - C.W. without forced air cooling. Can handle almost ten times higher power density with adequate air cooling. Standard sizes are 4" through 24" and in increments matching standard SFC absorber.

### C-RAM CFC

Class 10,000 cleanroom absorber



A fire-retardant, anti-static, Class 10,000 clean room absorber ideal for clean room testing of satellites and other very-sensitive, electronic components.

Six standard grades from 4" through 36" tall are available. Taller units may be supplied as custom parts.

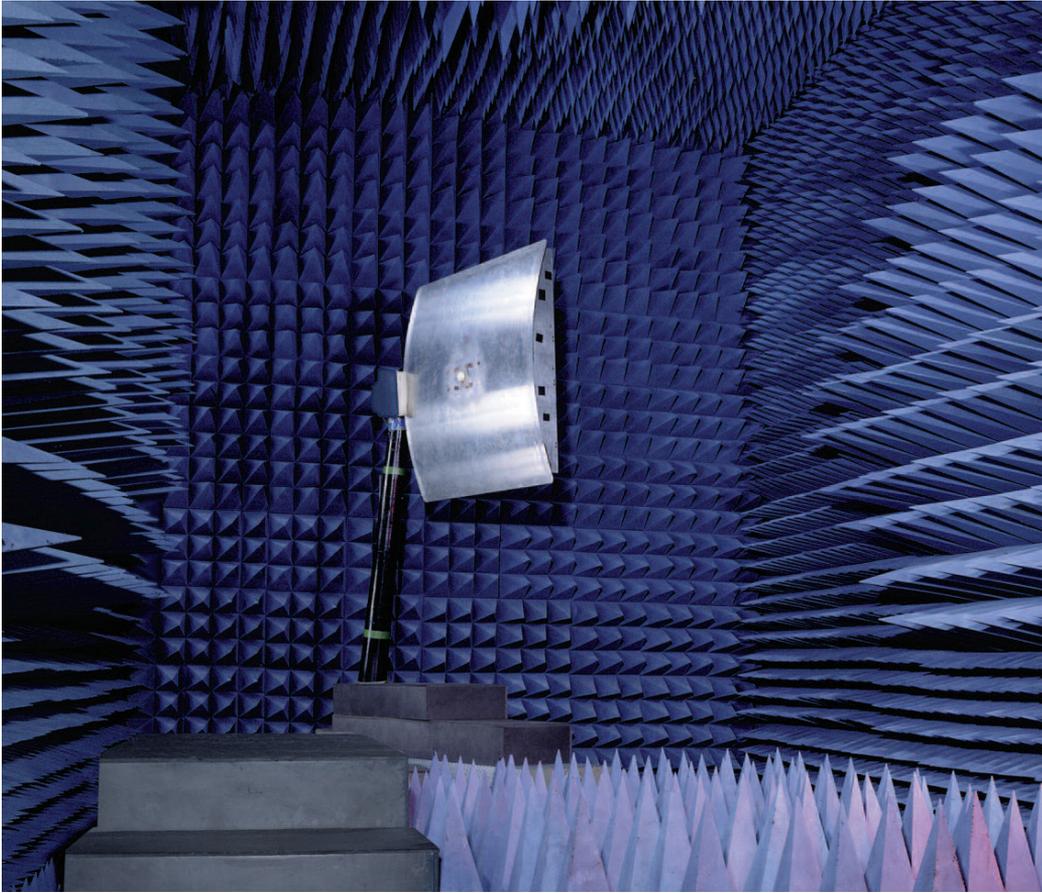
#### Absorber installation:

**Adhesive bonding:** Most common installation technique and most cost effective. Involves the use of a solvent based rubber contact adhesive for reliable mounting.

**Velcro™ fastening system:** Ideal for small absorbers (SFC-18 or less) on ceilings and walls. Allows for easy dismounting and relocation. Can be used for wall mounting 24" and 36" absorber.

**Clip and rail mounting:** This is a mechanical fastening system ideal for large absorbers. It also allows removal and relocation of absorber with little or no damage.

Far-field anechoic chamber, designed and installed by Cuming Microwave, for measuring performance characteristics of aircraft microwave antennas.



**Power handling:**

**No forced air                      With forced air**

**Standard power C-RAM SFC, FAC, CB**

0.8 W/in<sup>2</sup>

1.25 W/in<sup>2</sup>

**Medium power C-RAM EVA, SFC-MP, RFA**

2.0 W/in<sup>2</sup>

3.0 W/in<sup>2</sup>

**High power C-RAM SFC-HC**

10.0 W/in<sup>2</sup>

80 W/in<sup>2</sup>

## Cuming Microwave

Founded in 1980 by noted materials scientist Dr. William R. Cuming, and now part of PPG, Cuming Microwave provides innovative materials for the microwave industry within several market segments including telecom, electronics, military and aerospace, automotive and medical. Our focus is the manufacture and development of Microwave materials that are used to absorb and shape electromagnetic energy.

Cuming Microwave is an ISO 9001:2008 manufacturer located in Avon, MA USA. Featuring C-RAM®, microwave and RF absorbing materials, C-STOCK® low-loss dielectric materials, and turnkey Anechoic & EMC Chambers.

Our turnkey anechoic chambers are managed by Cuming Lehman Chambers, Inc. CLCI is a specialty general contractor and construction management group specializing in anechoic, RF shielded chamber facilities for RF/Microwave and EMC related testing.

**Contact a local representative or email us at [cmcsales@ppg.com](mailto:cmcsales@ppg.com)**

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