



# CUMING MICROWAVE

Technical Bulletin 390-5

## C-RAM FT-10 THIN CERAMIC FERRITE TILE RF ABSORBER

RoHS  
Compliant

C-RAM FT-10 is a thin ceramic ferrite tile with exceptional RF absorbing characteristics in the frequency range of 30 MHz to 2 GHz.

C-RAM FT-10 is a sintered ceramic and is excellent for high power and high temperature application up to the Curie point of 203°F. The tile has no outgassing and is ideal in high vacuum applications.

C-RAM FT-10 is frequently used in antenna caps and shielded enclosures to eliminate enclosure resonances during testing or emission measurements.

C-RAM FT-10 is used to line anechoic chambers for radiated emissions (ANSI C63.4) and immunity (IEC 1000-4-3) testing. These tiles can be combined with specially designed urethane foam pyramidal absorbers to extend chamber operation to above 20 GHz -- see Technical Bulletin 390-6 for Hybrid Absorbers. Our engineers can help you with the design of anechoic chambers using either the tiles alone or in conjunction with hybrid absorbers.

### METHOD OF APPLICATION

C-RAM FT-10 must be mounted on a conductive (reflective) backing in order to perform as described. Bond tiles in place using an epoxy or silicone adhesive. Excess adhesive should be pressed out and wiped away so the tiles remain in close physical contact with the reflective back plate in order not to change their rated performance.

Tiles can also be mounted using metal screws and plastic washers, screwed through the center hole. Drill-point screws are recommended if attaching to a metal surface. If attaching to a double-clad shielded enclosure, make certain the screw is only long enough to penetrate the inner surface and that



it does not puncture the outer shielded surface.

Pre-assembled panels may be mounted using screws drilled through a few of the 10 mm holes in the centers of the tiles. Again, care must be taken not to penetrate the outer shielded enclosure of the room.

FT-10 tiles are a hard ceramic, and are very difficult to cut. When lining a chamber for emissions and immunity testing, standard practice is leave small gaps at corners of rooms if the tiles do not fit exactly

### TYPICAL PROPERTIES

Color: Dark grey  
Thickness: 6.3 mm (0.25 in.)  
Dimensions: 100 x 100 mm (3.94 x 3.94 in)  
with a 10 mm hole in center of tile  
Weight: 324 g = 32.4 kg/m<sup>2</sup> (6.6 lb/ft<sup>2</sup>)  
Reflectivity:  
-dB: 18 25 30 25 20 12 9  
@MHz : 30 100 200 400 600 1000 1500

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## AVAILABILITY

C-RAM FT-10 tiles are available as individual tiles 100 x 100 mm, or as pre-assembled panels, 300 x 300 mm (11.81 x 11.81 in), in which the tiles have been bonded to a metal faced sheet of plywood, for ease in mounting to large areas.

Note that the tiles are supplied in metric units, and while they are approximately 4 inches per tile or 1 foot per panel, be sure to calculate area requirements accurately if the chamber is dimensioned in feet and inches.

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