



# CUMING MICROWAVE

## C-RAM FFS-125

**RoHS  
Compliant**

### TECHNICAL BULLETIN 310-6

#### **FLEXIBLE, BROADBAND MAGNETIC MICROWAVE ABSORBER**

---

C-RAM FFS-125 is a flexible sheet material which absorbs approximately 10 dB of incident RF energy across a frequency range of 2 to 12 GHz, over a wide range of incidence angles. The material is weatherproof and will withstand a wide temperature range. It will conform to complex shapes and is readily bonded to metal surfaces. C-RAM FFS-125 is intended for attachment to aircraft structures, nose cones, ship masts, instrument housings, and other surfaces for the reduction of specular radar reflections.

#### **TYPICAL PROPERTIES**

Color: Brown

Flammability: non-flammable

Reflectivity Performance: approx. -10 dB  
from 2 to 12 GHz. See typical curve on  
reverse

Thickness: 3.2 mm (0.125 in)

Weight: 11.8 kg/m<sup>2</sup> (2.4 lb/ft<sup>2</sup>)

Service Temperature: -50 to +200°C  
(-65 to +400°F)

Hardness, Shore A: 85

#### **METHOD OF APPLICATION**

The normal method of applying C-RAM FFS-125 to a substrate is with a silicone RTV adhesive. The sheet must be in intimate contact with a metal surface for proper resonant behavior. For best results, the metal should be scuffed with sandpaper, wiped with alcohol to remove dust and grease, and have a silicone primer applied, such as C-PRIME 215.

The silicone adhesive, such as C-BOND 255 or equivalent, is brushed or rolled onto one of the surfaces, and the sheet is then applied to the metal. An overnight cure is generally required, and a modest temperature cycle, such as a few hours at 150°F, helps the bond.

As an alternative, C-RAM FFS-125 can be supplied with a pressure sensitive adhesive, which, while not as strong as an RTV adhesive, will provide an adequate bond in many applications, particularly when one is bonding smaller pieces. Simply peel off the backing, stick the part to a primed surface, and apply heat with a heat gun for 1-2 minutes to effect a good bond.

#### **AVAILABILITY**

Standard product sizes of C-RAM FFS-125 are flat sheets 300 x 300 mm (12 x 12 in) and 400 x 500 mm (16 x 20 in). Specify the part as C-RAM FFS-125, and include the dimensions.

We can supply other dimensions, and can die-cut or laser-cut parts to your drawings.

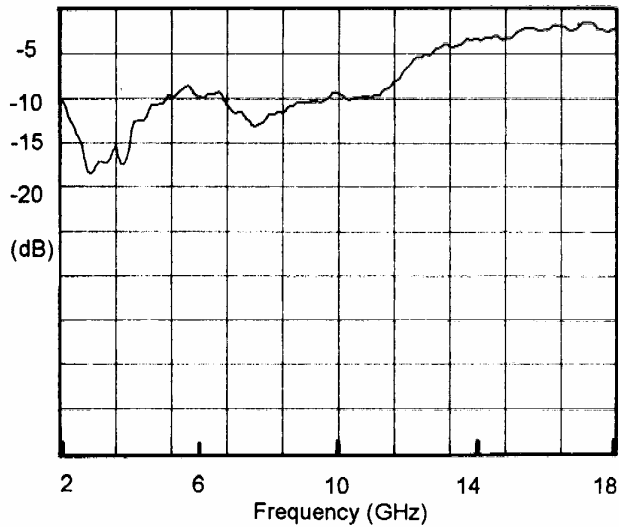
C-RAM FFS-125 can also be supplied with a peel-and-stick pressure sensitive adhesive backing (specify by adding a /PSA suffix to the part name) as well as a metal foil reflective backing (specify by adding a /MTL suffix).

---

Document Control No. N-06-000-01170-D  
06/04/07 page 1 of 2

## TYPICAL REFLECTIVITY

The graph below shows typical free-space reflectivity performance of C-RAM FFS-125, expressed as dB down from metal plate reflection, as a function of frequency. Measurement is made on a NRL near-field type arch.



---

The information in this technical bulletin, although believed to be accurate, is not to be taken as a warranty for which Cuming Microwave assumes legal responsibility, nor as permission or recommendation to practice any patented invention without license; it is offered for verification by the customer, who must make the final judgment of suitability for any application.