

CUMING MICROWAVE

Technical Bulletin 310-10

C-RAM FGMM

FLEXIBLE, BROADBAND, MAGNETIC MICROWAVE ABSORBER

**RoHS
Compliant**

C-RAM FGMM is a flexible sheet material, which absorbs on average -10 dB of incident RF energy across a frequency range of 4 to 10 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 FGMM 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: Grey

Flammability: non-flammable

Reflectivity Performance: approx. -10 dB
from 4 to 10 GHz. (see graph on pg. 2)

Thickness: 1.01 mm (0.040 in)

Weight: 4.9 kg/m² (1.0 lb/ft²)

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

Hardness, Shore A: 85



METHOD OF APPLICATION

The normal method of applying C-RAM FGMM 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.

C-RAM FGMM can also be supplied with a pressure sensitive adhesive backing. While not as strong as an RTV adhesive, it 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 achieve a good bond.

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AVAILABILITY

The standard product size of C-RAM FGMM is a flat sheet 300 x 300 mm (12 x 12 in) and 400 x 500 mm (16 x 20 in). Specify the part as C-RAM FGMM, and include the dimensions.

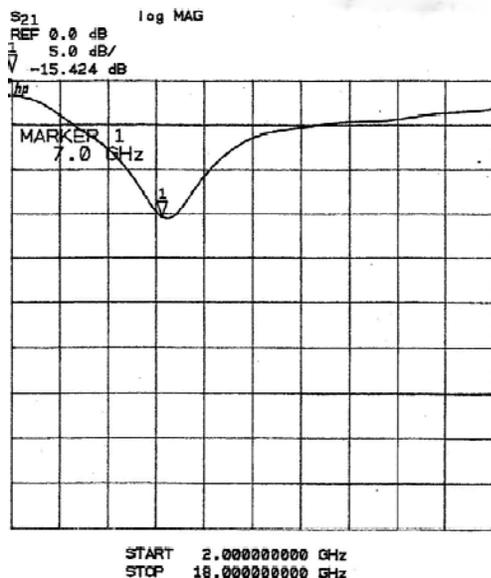
As a standard, C-RAM FGMM is supplied in a silicone, but can be produced in a urethane version. Urethane Temperature Range is -80 to 275 °F

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

C-RAM FGMM 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).

TYPICAL REFLECTIVITY

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



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