CUMING MICROWAVE

C-RAM MA50 and MA55

RoHS Compliant

TECHNICAL BULLETIN 330-8

MICROWAVE ABSORBING PLASTICS

C-RAM MA50 and MA55 are microwave absorbing mastic pastes which can be applied to vertical or horizontal surfaces. After the mastic cures into a rigid solid, it is impervious to moisture or other environmental effects. C-RAM mastics are intended for the reduction of radar cross section (RCS) of military vehicles and naval vessels as well as control of surface wave, antenna tuning, and many other uses.

C-RAM MA50 is a dielectric-type absorber. It consists of a highly thixotropic syntactic foam (plastic resin and glass microspheres) loaded with lightweight lossy fillers. It is relatively low in density, with a nominal specific weight of 40 lbs./ft^3 (Sp.Gr.=0.65).

C-RAM MA55 is a magnetic-type absorber. It is heavily loaded with magnetic fillers to make a thixotropic paste. Although very effective in relatively thin layers, it is dense (Sp.Gr.=4.0) and can add appreciable weight to the host system. Magnetic absorbers are recommended for control of surface waves.

Control of thickness is important, especially for magnetic materials. If no other test data are available, the optimum thickness of the mastic coating should be established by experimentation. Comb-like applicator trowels can be made to apply mastic in "furrows" of controlled thickness. The furrow can then be smoothed out to form a flat surface, or the furrows left intact to promote scattering. The front face of the furrows can be filled in with special materials if desired.

Technical advice is available from Cuming Microwave.

INSTRUCTIONS FOR USE

1. Surface to be coated should be clean and dry. A solvent wash, compatible with the substrate, is recommended. The temperature of the surface should be at least +50°F.

2. Weigh out only the amount of Part A which can be used within 30 minutes (pot life at room temperature). Add Part B and mix thoroughly.
MA50: 38 parts B to 100 parts A (by weight)
MA55: 6 parts B to 100 parts A (by weight)

3. Apply the mixed material to the prepared surfaces in the required thickness. Hardening time is dependent on temperature: 24 hours at +50°F, 8 hours at +80°F, and 1 hour at +125°F.

Note: the service temperature range is –55 to +120 °C (-70 to +250 °F). The material should be postcured at a temperature at least as high as its end use temperature.

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

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