



CUMING MICROWAVE

C-RAM KFS

RoHS
Compliant

TECHNICAL BULLETIN 330-6

LOSSY MAGNETIC UHF SILICONE CASTING RESIN

C-RAM KFS is a casting silicone for radar absorbers and loads, primarily for UHF and lower microwave bands. C-RAM KFS is a two-part liquid RTV silicone casting resin system. When cured, it converts to a flexible high temperature silicone rubber.

C-RAM KFS will adhere to itself and to most other silicones. It will release well from most other substrates unless an adhesion primer is used. C-PRIME 215 is recommended.

C-RAM KFS is used to mold loads and intricately contoured parts used for attenuation of signals and suppression of standing waves and RF noise, or to provide a lossy RF gasket. Pre-molded sheets of KFS are available as C-RAM FDSS (TB 310-5).

TYPICAL CURED PROPERTIES

Specific gravity: 3.9
Thermal expansion: $35 \times 10^{-6}/^{\circ}\text{F}$
Thermal conductivity, BTU-in/hr-ft²-°F: 4.0
Service temperature range: -80 to +400°F
Water absorption: <0.1%
Dielectric strength, volts/mil: >100
Attenuation:
1 GHz 15 dB/cm
3 GHz 24 dB/cm
8 GHz 50 dB/cm

MIXING AND USE

1. Prepare mold or cavity to be filled. C-RAM KFS will adhere to most other silicones and release well from most other substrates. If adhesion is desired use a thin coat of C-PRIME 215. In molding operations where excellent release is required, a wax mold release will be beneficial.

2. Kits are supplied as Part A (silicone resin plus filler) and Part B (curing agent). Stir the contents of Part A, preferably using a power mixer, to disperse any settled filler.

3. Measure out the material required, combine parts A and B in the portions listed below.

Mix the two parts, thoroughly scraping the sides and bottom, preferably using a power mixer. Pot life is approximately 1 hour.

Part A (parts by weight): 100

Part B (parts by weight): 1.4

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4. Best results are obtained by vacuum deairing the mixture. Pour the material into the prepared mold or cavity, taking care not to trap any air.

5. Cure the material at room temperature overnight, or at 175°F for three hours. At usage temperatures above 250°F a post cure at or above the usage temperature for approximately eight hours is recommended.

C-RAM materials are safe to use, provided care is taken to protect eyes and avoid excessive skin contact and breathing of vapors. Consult the Material Safety Data Sheet for details.

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