



## C-RAM KRS

RoHS  
Compliant

### TECHNICAL BULLETIN 330-4

#### IRON FILLED SILICONE CASTING RESIN FOR RF LOADS

C-RAM KRS is a series of two part liquid RTV silicone casting resin kits which can be used to mold wave guide terminations, attenuators, loads, RF gaskets, and other radar absorber parts. When cured, the material converts to a flexible, high temperature silicone rubber. Parts cast from C-RAM KRS have the same performance as parts machined from bars or sheets of C-RAM RGD-S (See Technical Bulletin 330-2). C-RAM KRS is available in the same grades as C-RAM RGD-S.

C-RAM KRS will cure and adhere to itself or to other silicone surfaces, however, it will release from most substrates. If adhesion is required, an application of C-PRIME 215 is recommended.

#### TYPICAL PROPERTIES

Cured parts of C-RAM KRS have essentially the same properties as the equivalent grade of C-RAM RGD-S.

|                   |     |  |
|-------------------|-----|--|
| Specific Gravity: |     |  |
| KRS-124           | 4.5 |  |
| KRS-117           | 4.2 |  |
| KRS-116           | 3.7 |  |

For C-RAM KRS-124, the following properties apply:

Thermal Expansion per °C:  $60 \times 10^{-6}$   
 Therm. Conductivity: .0021 cal-cm/sec-cm<sup>2</sup>-°C  
 (6.0 BTU-in/hr-ft<sup>2</sup>-°F)  
 Service Temperature: -55 to +200 °C  
 (-65 to +400 °F)  
 Hardness, Shore A: 75  
 Water Absorption, 24 hrs: <0.1%  
 Volume Resistivity, ohm-cm: >10<sup>10</sup>  
 Dielectric Strength, kv/mm: >400 (>100 V/mil)

#### METHOD OF APPLICATION

1) Prepare mold or cavity to be filled. C-RAM KRS will adhere to most silicones and release well from most other substrates. If adhesion is desired, use a thin coat of C-PRIME-215. In molding operations where the highest 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 thoroughly, preferably using a power mixer, to disperse settled filler.

3) Measure out the material required, combine Parts A and B in the proportions listed below. Mix the two parts, thoroughly scraping the sides and bottom. A power mixer is preferred. Pot life is approximately 1 hour.

|                 |         |      |      |
|-----------------|---------|------|------|
| Parts by weight | KRS-124 | -117 | -116 |
| A               | 100     | 100  | 100  |
| B               | 1.08    | 1.30 | 1.70 |

4) Best results are obtained by vacuum de-airing the mixture. Pour the material into the prepared mold or cavity taking care not to entrap air.

5) Cure the material at room temperature overnight, or at 80 °C (175 °F) for three hours. At usage temperatures above 120 °C (250 °F), a post cure at or above the usage temperature for approximately eight hours is recommended.

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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 Materials Safety Data Sheet for details.

## **AVAILABILITY**

C-RAM KRS is available in two-part kits in the following sizes:

- 3 lb. pint (1.35 kg total weight)
- 6 lb. quart (2.7 kg total weight)
- 25 lb. gallon (11.3 kg total weight)

Shelf life is at least 12 months when stored in unopened containers. It may be necessary to power stir the contents as settling may occur.

Completed castings or machined pads are available as C-RAM RGD-S.

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