Technical Data Sheet

Engineered Materials

C-RAM™ KR

Two part castable iron filled epoxy resin load absorber

Description

C-RAM™ KR is a series of two-part castable epoxy resin that remains rigid when cured.

Once cured, C-RAM KR will have the same electrical and physical properties of its counterpart C-RAM™ RGD.

In general, best performance is obtained at lower frequencies by using a high iron loadings, whereas low loadings work best at higher frequencies. Generally, C-RAM™ KR-117 and -124 are the preferred grades below 30 GHz.

A non-rusting version of the C-RAM™ KR material is available in one grade only, denoted KR-115-IS.

Availability

C-RAM™ KR 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 6 months when stored in unopened containers. It may be necessary to power stir the contents as settling may occur.

Applications

C-RAM™ KR can be used to mold waveguide terminations, attenuators, and RF loads.

C-RAM™ KR can also be used to reduce cavity resonance and to lower the cavity Q.

Method of application

Prepare mold or cavity to be filled. Being an epoxy, C-RAM™ KR will adhere well to many mold surfaces; therefore, if adhesion is not desired, mold surfaces must be coated with a release agent such as wax or silicone grease.

Kits are supplied as Part A (epoxy resin plus filler) and Part B (hardener plus filler). Stir the contents of both containers thoroughly to disperse any settled filler. The high to medium loaded materials are quite viscous, it helps to warm the material to 150 °F prior to stirring.

Measure out the amounts of material required. Combine Parts A and B in equal quantities by either weight or volume. Mix the two parts together thoroughly, preferably using a power mixer. Again, keeping the mixture warm helps the homogeneity of the mix.

Best results are obtained by degassing the mixture under a vacuum. Pot life at 150 °F is between one and two hours. Pour the mixture into the mold, try to avoid trapped air.

Cure the material in an oven at 300 °F for 2 hours. Allow to cool gradually before removing from mold. For large castings cure at 300 °F for 4 hours.

Typical properties

Specific gravity

KR-124	4.5
KR-117	4.2
KR-116	3.7
KR-114	2.9
KR-112	2.3
KR-110	2.1

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