



**CCD ADHESIVE/SEALANT RJ9F CCD
FORMULATION 4180**

Formula 4180 is specifically designed for sealing CCD windows with ceramic or plastic packages. The reactivity and flow characteristics are tailored for clip and bake or automated cycles.

TYPICAL PROPERTIES

Max operating temperature (continuous), °C	NA
Outgassing	NA
Moisture absorption (24 hr. soak in water @ 100°C)	<2.5%
Total ionic content (specific electrical conductance), mS/m	NA
Extractable Ions, ppm	NA
Hydrolysable chloride content, ppm (MIL-STD 883H Method 5011.5)	NA
Ultimate Tg by DSC, °C	100
Modulus, psi	NA
CTE, ppm/°C	30
Dielectric constant (@ 1MHz)	NA
Volume resistivity, Ohm-cm	NA
Thermal conductivity, W/m-k	NA

TYPICAL SEALED PACKAGE PERFORMANCE PROPERTIES

Reflow temperature, °C	NA
Lap shear strength (gold/ceramic @ 25°C), psi	NA

*These values may vary depending upon the materials to which the epoxy is adhered. All above data is based on sealed packages consisting of a ceramic header and a ceramic lid.

SEALING AND CURING

This material is designed for clip and bake process as well as automated sealing. The specific sealing temperature cycle can be varied to meet specific package configurations. Typical curing cycles are 1 hour at 150 deg. C, 2 hours at 120 deg C, or 3 hours 110 deg. C under 5 psi of pressure. For alternate curing practices or automatic sealing procedures, please consult RJR Technologies Customer Service. (Phone 510-638-5901 or Fax 510-638-5958)

STORAGE AND HANDLING

Keep parts with the material in vacuum sealed bag with dry-packs at 3-8°C and <50% RH. Shelf life of the material when stored under refrigerated conditions (3-8°C) is 6 months from the date of manufacture. Room temperature and frozen storage conditions may be appropriate for some applications. Please consult RJR Technologies Customer Service for specific storage options.

REGULATORY

This product is RoHS compliant.

NOTICE

This data is provided for guideline purposes. No warranty is made on the actual use. Customers should perform their own tests and qualifications.