Plaskon PPF-165

Epoxy; Epoxide

Cookson Electronics - Semiconductor Products

Message:

This material is a conventional epoxy molding compound specifically formulated for semiconductor devices which are molded with preplated leadframes. It increases semiconductor manufacturing productivity and reduces production costs.

| General Information | | | |
|------------------------------|------------------------|----------|-------------|
| Features | Semi-conductive | | |
| | Low viscosity | | |
| | Fast curing | | |
| | | | |
| Forms | Liquid | | |
| Processing Method | Resin transfer molding | | |
| Physical | Nominal Value | Unit | Test Method |
| Specific Gravity | 1.80 | g/cm³ | ASTM D792 |
| Molding Shrinkage - Flow | 0.30 | % | ASTM D955 |
| Mechanical | Nominal Value | Unit | Test Method |
| Flexural Modulus | 1.52 | MPa | ASTM D790 |
| Flexural Strength | 0.0124 | MPa | ASTM D790 |
| Thermal | Nominal Value | Unit | Test Method |
| Glass Transition Temperature | 130 | °C | ASTM E1356 |
| CLTE - Flow | 2.1E-5 | cm/cm/°C | ASTM D696 |
| Electrical | Nominal Value | Unit | Test Method |
| Volume Resistivity | 5.0E+15 | ohms·cm | ASTM D257 |
| Dielectric Strength | 16 | kV/mm | ASTM D149 |
| Dielectric Constant (1 kHz) | 3.50 | | ASTM D150 |
| Dissipation Factor (1 kHz) | 3.0E-3 | | ASTM D150 |
| Arc Resistance | 180 | sec | ASTM D495 |
| Flammability | Nominal Value | Unit | Test Method |
| Flame Rating (3.18 mm) | V-0 | | UL 94 |
| Oxygen Index | 30 | % | ASTM D2863 |
| Additional Information | | | |

Recommended Storage Temperature: 5°CLife @ 5°C, defined as not more than 40% loss of spiral flow based on original values.: 24 monthsLife @ 21°C, defined as not more than 40% loss of spiral flow based on original values.: 5 daysLife @ 35°C, defined as not more than 40% loss of spiral flow based on original values.: 2 daysSpiral Flow, 165°C, 1000 psi: 72 cmSpiral Flow, 175°C, 1000 psi: 72 cmAutomatic Orifice Viscosity, 175°C, Shear Rate is 100000 sec-1, 1 mm die length, 1/2 mm diameter: 11 poiseAutomatic Orifice Viscosity, 165°C, Shear Rate is 100000 sec-1, 1 mm die length, 1/2 mm diameter: 17 Pascal secRam Follower Gel Time, 165°C: 18 secRam Follower Gel Time, 175°C: 12 secAsh Content: 72 %Hydrolyzable Halides: <1 ppmCull Hot Hardness, Shore D, 90 sec, 165°C: 80Cull Hot Hardness, Shore D, 90 sec, 175°C: 90Gangpot Hot Hardness, Shore D, 30 sec, 165°C: 70Arc Resistance, 110v AC180 secAll test specimens are transfer molded and post cured for 4 hours at 175°CThe following information was transfer molded and post cured for 15 minutes at 175°C

Glass Transition Temperature Tg: 157°C

Linear Thermal Expansion, Alpha 1: 21 cm^-6/cm/°C Linear Thermal Expansion, Alpha 2: 64 cm^-6/cm/°C

The following information was transfer molded and post cured for 15 minutes at 165°C

Glass Transition Temperature Tg: 157°C

Linear Thermal Expansion, Alpha 1: 21 cm^-6/cm/°C Linear Thermal Expansion, Alpha 2: 67 cm^-6/cm/°C

Thermal Conductivity14 cal/cm-sec-°C

The following information was transfer molded and post cured for 30 seconds at 175°C

Glass Transition Temperature Tg: 130°C

Linear Thermal Expansion, Alpha 1: 21 cm^-6/cm/°C Linear Thermal Expansion, Alpha 2: 64 cm^-6/cm/°C

The following information was transfer molded and post cured for 30 seconds at 165°C

Glass Transition Temperature Tg: 135°C

Linear Thermal Expansion, Alpha 1: 21 cm^-6/cm/°C Linear Thermal Expansion, Alpha 2: 67 cm^-6/cm/°C

Injection instructions

Conventional Resin TransferMolding: Preheat Temperature: 85 to 95°C Molding Temperature: 165 to 175°C Molding Pressure: 500 to 1000 psi Cycle Time, 175°C: 30 to 60 sec Cycle Time, 165°C: 60 to 90 sec Cure Time, 177°C: 0 to 15min Post Mold Cure Time, 175°C: 0 to 15 hr Gangpot Resin TransferMolding: Preheat Temperature: 165°C Molding Temperature: 35 to 70°C Molding Pressure: 500 to 1000 psi Cycle Time, 175°C: <30 sec Cycle Time, 165°C: 40 sec

Post Mold Cure Time, 175°C: 0 to 15 hr Post Mold Cure Time, 165°C: 0 to 15 hr

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