# Plaskon SMT-B-1LAS

Epoxy; Epoxide

Cookson Electronics - Semiconductor Products

## Message:

This material is an epoxy molding compound optimized specifically for grid arrays (BGA/LGA) requiring low alpha particle count. It has the same unique resin system as the SMT-B-1, which minimizes warpage and enables trouble-free molding onto rigid and flexible laminate substrates. An all-spherical filler system ensures outstanding moldability both with automated and conventional molding systems. Minimal dimensional change after molding, post bake and subsequent solder treatment make this compound an excellent choice for grid array applications.

| General Information | | | |
|---|---|---|---|
| Features | Semi-conductive<br>Good dimensional stability<br>Low warpage<br>Low viscosity<br>High temperature strength<br>Fast curing | | |
| Forms | Liquid | | |
| Processing Method | Resin transfer molding | | |
| **Physical** | **Nominal Value** | **Unit** | **Test Method** |
| Specific Gravity | 1.88 | g/cm³ | ASTM D792 |
| Molding Shrinkage - Flow | 0.050 | % | ASTM D955 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Flexural Modulus | | | ASTM D790 |
| 21°C | 1.37 | MPa | ASTM D790 |
| 215°C | 0.588 | MPa | ASTM D790 |
| Flexural Strength | | | ASTM D790 |
| 21°C | 0.0108 | MPa | ASTM D790 |
| 215°C | 0.00441 | MPa | ASTM D790 |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Glass Transition Temperature | 220 | °C | ASTM E1356 |
| CLTE - Flow | 1.6E-5 | cm/cm/°C | ASTM D696 |
| Thermal Conductivity | 0.70 | W/m/K | ASTM C177 |
| **Electrical** | **Nominal Value** | **Unit** | **Test Method** |
| Volume Resistivity | 1.0E+15 | ohms·cm | ASTM D257 |
| Dielectric Strength | 16 | kV/mm | ASTM D149 |
| Dielectric Constant (1 kHz) | 3.70 | | ASTM D150 |
| Dissipation Factor (1 kHz) | 2.1E-3 | | ASTM D150 |
| **Flammability** | **Nominal Value** | **Unit** | **Test Method** |
| Flame Rating (3.18 mm) | V-0 | | UL 94 |
| Oxygen Index | 34 | % | 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, 175°C, 1000 psi: 140 cmAutomatic Orifice Viscosity, 175°C, Shear Rate is 100000 sec-1, 1 mm die length, 1/2 mm diameter: 45 poiseRam Follower Gel Time, 175°C, 1000 psi: 15 secAsh Content: 77 %Hydrolyzable Halides: <1 ppmAlpha Particle Count: <0.001 counts/$cm^2$/hrCull Hot Hardness, Shore D, 90 sec, 175°C: 75Volume Resistivity, 22°C: 1e15 ohm-cmAll test specimens are transfer molded and post cured for 4 hours at 175°C
Linear Thermal Expansion, Alpha 1: 16 cm^-6/cm/°C
Linear Thermal Expansion, Alpha 2: 68 cm^-6/cm/°C

## Injection instructions

Resin Transfer Molding:
Preheat Temperature: 90 to 100°C
Molding Temperature: 170 to 185°C
Molding Pressure: 750 to 1000 psi
Cure Time, 177°C: 2 to 3min
Post Mold Cure Time, 175°C: 4 to 5 hr

## Recommended distributors for this material

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