# Plaskon MUF-2A

Epoxy; Epoxide

Cookson Electronics - Semiconductor Products

## Message:

This material is an epoxy Molded UnderFill compound developed for transfer mold equipment to underfill, and overmold if needed, Flip Chip in Package (FC-BGA and FC-CSP) in one step. It offers high productivity with an automated, simple, robust and fast process compared to liquid encapsulation. Higher reliability is demonstrated with the material's higher Tg, lower CTE, no particle segregation or settling and longer outlife compared to liquid encapsulants. PLASKON? MUF Series is the total molded underfill solution for Flip Chip in Package.

| General Information | | | |
|---|---|---|---|
| Features | Semi-conductive<br>Low warpage<br>Workability, good | | |
| Forms | Liquid | | |
| Processing Method | Resin transfer molding | | |
| **Physical** | **Nominal Value** | **Unit** | **Test Method** |
| Specific Gravity | 1.89 | g/cm³ | ASTM D792 |
| Molding Shrinkage - Flow | 5.0 | % | ASTM D955 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Flexural Modulus | | | ASTM D790 |
| 22°C | 1.77 | MPa | ASTM D790 |
| 215°C | 0.588 | MPa | ASTM D790 |
| Flexural Strength | | | ASTM D790 |
| 22°C | 0.00834 | MPa | ASTM D790 |
| 215°C | 0.00343 | MPa | ASTM D790 |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Glass Transition Temperature | 195 | °C | ASTM E1356 |
| CLTE - Flow | 1.6E-5 | cm/cm/°C | ASTM D696 |
| Thermal Conductivity | 0.75 | W/m/K | ASTM C177 |
| **Electrical** | **Nominal Value** | **Unit** | **Test Method** |
| Volume Resistivity | 4.5E+15 | ohms·cm | ASTM D257 |
| Dielectric Strength | 31 | kV/mm | ASTM D149 |
| Dielectric Constant (1 kHz) | 3.13 | | ASTM D150 |
| Dissipation Factor (1 kHz) | 1.7E-3 | | ASTM D150 |
| **Flammability** | **Nominal Value** | **Unit** | **Test Method** |
| Flame Rating (3.18 mm) | V-0 | | UL 94 |
| **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: 150 cmShimadzu Viscosity, 175°C, 1000 psi: 40 poiseRam Follower Gel Time, 175°C, 1000 psi: 16 secAsh Content: 80 %Hydrolyzable Halides: <1 ppmCull Hot Hardness, Shore D: 85All 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: 55 cm^-6/cm/°C

## Injection instructions

Resin Transfer Molding:
Preheat Temperature: 80 to 85°C
Molding Temperature: 165 to 170°C
Molding Pressure: 500 to 900 psi
In Mold Cure Time: 100 to 200 sec
Transfer Time: 6 to 15sec



## Recommended distributors for this material

### Susheng Import & Export Trading Co.,Ltd.

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