

Plenco 04300 (Compression)

Phenolic

Plastics Engineering Co.

Message:

PLENCO 04300 is a heat resistant, mineral filled phenolic molding compound offering optimum cure characteristics and excellent dimensional stability. It is formulated for wiring devices and electrical control applications. Type ASTM 5948 CFG, and UL recognized under component file E40654. 04300 is available in black.

| General Information | | | |
|---|------------------------------------|-------------------|-------------|
| UL YellowCard | E40654-231603 | | |
| Filler / Reinforcement | Mineral filler | | |
| Features | Good dimensional stability | | |
| | Fast curing | | |
| | Heat resistance, high | | |
| Uses | Electrical/Electronic Applications | | |
| UL File Number | E40654 | | |
| Appearance | Black | | |
| Forms | Particles | | |
| Processing Method | Compression molding | | |
| Physical | Nominal Value | Unit | Test Method |
| Specific Gravity | 1.57 | g/cm ³ | ASTM D792 |
| Apparent Density | 0.72 | g/cm ³ | ASTM D1895 |
| Molding Shrinkage - Flow | 0.31 | % | ASTM D955 |
| Water Absorption (24 hr) | 0.18 | % | ASTM D570 |
| Hardness | Nominal Value | Unit | Test Method |
| Rockwell Hardness (E-Scale) | 83 | | ASTM D785 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus | 11100 | MPa | ASTM D638 |
| Tensile Strength | 44.1 | MPa | ASTM D638 |
| Tensile Elongation (Break) | 0.40 | % | ASTM D638 |
| Flexural Modulus | 10100 | MPa | ASTM D790 |
| Flexural Strength | 77.4 | MPa | ASTM D790 |
| Compressive Strength | 193 | MPa | ASTM D695 |
| Impact | Nominal Value | Unit | Test Method |
| Charpy Notched Impact Strength | 20.4 | J/m | ASTM D256 |
| Notched Izod Impact | 17 | J/m | ASTM D256 |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load (1.8 MPa, Unannealed) | 190 | °C | ASTM D648 |
| Continuous Use Temperature | 204 | °C | ASTM D794 |

| | | | |
|----------------------------------|----------------------|-------------|--------------------|
| CLTE - Flow | 5.2E-5 | cm/cm/°C | ASTM E831 |
| Thermal Conductivity (100°C) | 0.54 | W/m/K | ASTM C177 |
| Electrical | Nominal Value | Unit | Test Method |
| Volume Resistivity | 2.1E+12 | ohms·cm | ASTM D257 |
| Dielectric Strength ¹ | 15 | kV/mm | ASTM D149 |
| Dielectric Constant (1 MHz) | 5.10 | | ASTM D150 |
| Dissipation Factor (1 MHz) | 0.039 | | ASTM D150 |
| Arc Resistance | 180 | sec | ASTM D495 |
| Comparative Tracking Index (CTI) | 200 | V | UL 746 |
| Flammability | Nominal Value | Unit | Test Method |
| Flame Rating (1.50 mm) | V-0 | | UL 94 |
| Oxygen Index | 28 | % | ASTM D2863 |

Additional Information

The value listed as Thermal Conductivity, ASTM C177 was tested according to the ASTM E1461 standard. The value listed as Mold Shrink, Linear-Flow, ASTM D955 was tested according to the ASTM D6289 standard. The value listed as Comparative Tracking Index, UL 746 was tested according to ASTM D3638. Post Shrinkage, ASTM D6289, 72hr, 120°C: 0.12% Heat Resistance, ASTM D794: 204°C Drop Ball Impact, PLENCO Method: 98 J/m

| | | |
|--------------------|----------------------|-------------|
| Injection | Nominal Value | Unit |
| Drying Temperature | 90.0 | °C |
| Drying Time | 0.50 | hr |
| Mold Temperature | 165 - 182 | °C |
| Back Pressure | 0.300 | MPa |
| Screw Speed | < 60 | rpm |

Injection instructions

Mold Close Time: 3-8 sec

NOTE

- Method A (short time)

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