Plenco 05118 (Injection)

Phenolic

Plastics Engineering Co.

Message:

PLENCO 05118 is a mineral and graphite filled phenolic molding compound, formulated for bearing seals. 05118 provides for a low coefficient of friction, abrasion resistance, minimal water absorption, and excellent dimensional stability under severe exposure. 05118 is available in gray. 05118 is not recommended for electrical insulating applications.

| General Information | | | | | |
|--------------------------------|----------------------------|-------|-------------|--|--|
| Filler / Reinforcement | Mineral filler | | | | |
| | Graphite powder | | | | |
| | | | | | |
| Features | Good dimensional stability | | | | |
| | Low friction coefficient | | | | |
| | Good wear resistance | | | | |
| | Low or no water absorption | | | | |
| Uses | Insulating material | | | | |
| | Seals | | | | |
| Appearance | Grey | | | | |
| Forms | Particles | | | | |
| Processing Method | Injection molding | | | | |
| Physical | Nominal Value | Unit | Test Method | | |
| Specific Gravity | 1.82 | g/cm³ | ASTM D792 | | |
| Apparent Density | 0.89 | g/cm³ | ASTM D1895 | | |
| Molding Shrinkage - Flow | 0.35 | % | ASTM D955 | | |
| Water Absorption (24 hr) | 0.050 | % | ASTM D570 | | |
| Hardness | Nominal Value | Unit | Test Method | | |
| Rockwell Hardness (E-Scale) | 58 | | ASTM D785 | | |
| Mechanical | Nominal Value | Unit | Test Method | | |
| Tensile Modulus | 13300 | MPa | ASTM D638 | | |
| Tensile Strength | 39.0 | MPa | ASTM D638 | | |
| Tensile Elongation (Break) | 0.50 | % | ASTM D638 | | |
| Flexural Modulus | 11100 | MPa | ASTM D790 | | |
| Flexural Strength | 64.6 | MPa | ASTM D790 | | |
| Compressive Strength | 128 | MPa | ASTM D695 | | |
| Impact | Nominal Value | Unit | Test Method | | |
| Charpy Notched Impact Strength | 16.1 | J/m | ASTM D256 | | |
| Notched Izod Impact | 16 | J/m | ASTM D256 | | |
| Thermal | Nominal Value | Unit | Test Method | | |

| Deflection Temperature Under Load (| 1.8 | | |
|-------------------------------------|-----|----|-----------|
| MPa, Unannealed) | 180 | °C | ASTM D648 |
| Continuous Use Temperature | 202 | °C | ASTM D794 |

Additional Information

The value listed as Mold Shrink, Linear-Flow, ASTM D955 was tested according to the ASTM D6289 standard.Post Shrinkage, ASTM D6289, 72hr, 120°C: 0.07%Drop Ball Impact, PLENCO Method: 59 J/m

| Injection | Nominal Value | Unit | |
|------------------------|---------------|------|--|
| Suggested Shot Size | 20 - 80 | % | |
| Rear Temperature | 66.0 - 82.0 | °C | |
| Front Temperature | 82.0 - 99.0 | °C | |
| Processing (Melt) Temp | 104 - 115 | °C | |
| Mold Temperature | 165 - 182 | °C | |
| Injection Pressure | 6.20 - 11.0 | МРа | |
| Back Pressure | 0.300 | МРа | |
| Screw Speed | < 60 | rpm | |
| Cushion | 3.00 | mm | |
| Injection instructions | | | |

Injection Time: 3-8 sec

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