

CoolPoly® D5112

Thermally Conductive Polyphenylene Sulfide (PPS)

Description

CoolPoly D series of thermally conductive plastics transfers heat, a characteristic previously unavailable in injection molding grade polymers. CoolPoly is lightweight, netshape moldable and allows design freedom in applications previously restricted to metals. The D series is electrically non-conductive and can be used for its dielectric properties.

| Physical Properties | Value | Unit | Test Standard |
|--------------------------------|--------|----------------------|---------------|
| Density | 1730 | kg/m ³ | ISO 1183 |
| Mold Shrinkage – Parallel | 0.1 | % | ISO 294-4 |
| Mold Shrinkage – Normal | 0.3 | % | ISO 294-4 |
| Mechanical Properties | Value | Unit | Test Standard |
| Tensile Modulus | 26200 | MPa | ISO 527-1 |
| Tensile Strength | 42 | MPa | ISO 527-1 |
| Strain @ Break | 0.23 | % | ISO 527-1 |
| Flexural Modulus | 19800 | MPa | ISO 178 |
| Flexural Strength | 77 | MPa | ISO 178 |
| Charpy Unnotched (23°C) | 4.00 | kJ/m ² | ISO 179-1 |
| Charpy Notched (23°C) | 1.20 | kJ/m ² | ISO 179-1 |
| Thermal Properties | Value | Unit | Test Standard |
| Thermal Conductivity, In-Plane | 6 | W/mK | ASTM E1461 |
| Thermal Diffusivity, In-Plane | 0.0353 | cm ² /sec | ASTM E1461 |
| Specific Heat | 0.949 | J/g°C | ASTM E1461 |