# CoolPoly® D3612

## Polyamide 46

Cool Polymers, Inc.

#### Message:

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.

| General Information             |                         |         |             |
|---------------------------------|-------------------------|---------|-------------|
| Features                        | Electrically Insulating |         |             |
|                                 | Good Moldability        |         |             |
|                                 | Thermally Conductive    |         |             |
| Forms                           | Pellets                 |         |             |
| Processing Method               | Injection Molding       |         |             |
| Physical                        | Nominal Value           | Unit    | Test Method |
| Density                         | 1.60                    | g/cm³   | ISO 1183    |
| Molding Shrinkage               |                         |         | ASTM D551   |
| Flow                            | 0.30                    | %       |             |
| Across Flow                     | 0.40                    | %       |             |
| Mechanical                      | Nominal Value           | Unit    | Test Method |
| Tensile Modulus                 | 12500                   | MPa     | ISO 527-2   |
| Tensile Stress (Yield)          | 60.0                    | MPa     | ISO 527-2   |
| Nominal Tensile Strain at Break | 0.60                    | %       | ISO 527-2   |
| Flexural Modulus                | 11500                   | MPa     | ISO 178     |
| Flexural Stress                 | 100                     | MPa     | ISO 178     |
| Thermal                         | Nominal Value           | Unit    | Test Method |
| Specific Heat                   | 1290                    | J/kg/°C | ASTM E1461  |
| Thermal Conductivity            | 6.0                     | W/m/K   | ASTM E1461  |
| Thermal Diffusivity             | 0.0280                  | cm²/s   | ASTM E1461  |
| Flammability                    | Nominal Value           |         | Test Method |
| Flame Rating (2.00 mm)          | V-0                     |         | UL 94       |

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