

## CoolPoly® E1201

### Thermally Conductive Polypropylene (PP)

#### Description

CoolPoly E 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 E series is electrically conductive and provides inherent EMI/RFI shielding characteristics.

| Physical Properties            | Value  | Unit                 | Test Standard |
|--------------------------------|--------|----------------------|---------------|
| Density                        | 1240   | kg/m <sup>3</sup>    | ISO 1183      |
| Mold Shrinkage – Parallel      | 0.35   | %                    | ISO 294-4     |
| Mold Shrinkage – Normal        | 0.6    | %                    | ISO 294-4     |
| Mechanical Properties          | Value  | Unit                 | Test Standard |
| Tensile Modulus                | 5620   | MPa                  | ISO 527-1     |
| Tensile Strength               | 22     | MPa                  | ISO 527-1     |
| Strain @ Break                 | 1      | %                    | ISO 527-1     |
| Flexural Modulus               | 5410   | MPa                  | ISO 178       |
| Flexural Strength              | 37     | MPa                  | ISO 178       |
| Charpy Unnotched (23°C)        | 5.38   | kJ/m <sup>2</sup>    | ISO 179-1     |
| Charpy Notched (23°C)          | 3.25   | kJ/m <sup>2</sup>    | ISO 179-1     |
| Thermal Properties             | Value  | Unit                 | Test Standard |
| Thermal Conductivity, In-Plane | 10     | W/mK                 | ASTM E1461    |
| Thermal Diffusivity, In-Plane  | 0.0587 | cm <sup>2</sup> /sec | ASTM E1461    |
| Specific Heat                  | 1.28   | J/g°C                | ASTM E1461    |

