

EMERGE™ PC 4330ECO

Advanced Resin

Overview

EMERGE PC 4330ECO Advanced Polycarbonate Resin contains 50% post consumer recycled (PCR) polycarbonate with IEEE 1680:2006 certified by TÜV Rheinland. Its color under the code of IC8800234 meets the stringent requirement of white. This resin also provides a property balance of flowability, ductility, stiffness and thermal resistance to meet the market needs on various applications in information technology equipment (ITE) and consumer electronics without painting or coating.

Applications

- Packaging for ITE
- Electronic accessories
- Electrical appliances

| Physical | Nominal Value (English) | Nominal Value (SI) | Test Method |
|---|-------------------------|------------------------|-------------|
| Density | 1.26 g/cm ³ | 1.26 g/cm ³ | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (300°C/1.2 kg) | 23 g/10 min | 23 g/10 min | ASTM D1238 |
| Molding Shrinkage - Flow | 5.0E-3 to 7.0E-3 in/in | 0.50 to 0.70 % | ASTM D955 |
| Mechanical | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Tensile Modulus | | | ASTM D638 |
| 0.126 in (3.20 mm), Injection Molded | 319000 psi | 2200 MPa | |
| Tensile Strength | | | ASTM D638 |
| Yield, 0.126 in (3.20 mm), Injection Molded | 8990 psi | 62.0 MPa | |
| Tensile Elongation | | | ASTM D638 |
| Break, 0.126 in (3.20 mm), Injection Molded | 110 % | 110 % | |
| Flexural Modulus | | | ASTM D790 |
| 0.126 in (3.20 mm), Injection Molded | 355000 psi | 2450 MPa | |
| Flexural Strength | | | ASTM D790 |
| 0.126 in (3.20 mm), Injection Molded | 13900 psi | 96.0 MPa | |
| Impact | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Notched Izod Impact | | | ASTM D256 |
| 73°F (23°C), 0.126 in (3.20 mm), Injection Molded | 12 ft-lb/in | 640 J/m | |
| Hardness | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Durometer Hardness | | | ASTM D2240 |
| Shore A, 0.126 in (3.20 mm), Injection Molded | 99 | 99 | |
| Shore D, 0.126 in (3.20 mm), Injection Molded | 86 | 86 | |
| Thermal | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Deflection Temperature Under Load | | | ASTM D648 |
| 66 psi (0.45 MPa), Unannealed | 268 °F | 131 °C | |
| 264 psi (1.8 MPa), Unannealed | 246 °F | 119 °C | |
| Injection | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Drying Temperature | 248 °F | 120 °C | |
| Drying Time | 3.0 to 4.0 hr | 3.0 to 4.0 hr | |
| Processing (Melt) Temp | 536 to 572 °F | 280 to 300 °C | |
| Mold Temperature | 140 to 194 °F | 60 to 90 °C | |