

Makrolon® Ai2457

 Covestro - Polycarbonates - *Polycarbonate*

General Information

Product Description

 MVR (300 °C/1.2 kg) 19 cm³/10 min; UV stabilized; easy release; available in translucent colors only; Automotive interior; developed for high-gloss surfaces with highest requirements

General

| | | | |
|-----------------|---|-----------------|-----------------|
| Material Status | • Commercial: Active | | |
| Availability | • Africa & Middle East | • Europe | • North America |
| | • Asia Pacific | • Latin America | |
| Additive | • UV Stabilizer | | |
| Features | • Good Mold Release | • High Gloss | • UV Stabilized |
| Uses | • Automotive Applications • Automotive Interior Parts | | |
| Appearance | • Colors Available • Translucent | | |

 Properties ¹

| Physical | Nominal Value | Unit | Test Method |
|--|---------------|-----------------------|--------------|
| Melt Mass-Flow Rate (MFR) (300°C/1.2 kg) | 19 | g/10 min | ISO 1133 |
| Molding Shrinkage ² | | | ISO 294-4 |
| Across Flow : 0.0787 in | 0.70 | % | |
| Flow : 0.0787 in | 0.65 | % | |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus (73°F) | 348000 | psi | ISO 527-1/1 |
| Tensile Stress (Yield, 73°F) | 9280 | psi | ISO 527-2/50 |
| Tensile Stress (Break, 73°F) | 9430 | psi | ISO 527-2/50 |
| Tensile Strain (Yield, 73°F) | 6.0 | % | ISO 527-2/50 |
| Tensile Strain (Break, 73°F) | 120 | % | ISO 527-2/50 |
| Nominal Tensile Strain at Break (73°F) | > 50 | % | ISO 527-2/50 |
| Flexural Modulus ³ (73°F) | 341000 | psi | ISO 178 |
| Flexural Stress ³ | | | ISO 178 |
| 73°F | 14200 | psi | |
| 3.5% Strain, 73°F | 10700 | psi | |
| Flexural Strain at Flexural Strength ⁴ (73°F) | 7.0 | % | ISO 178 |
| Impact | Nominal Value | Unit | Test Method |
| Charpy Unnotched Impact Strength | | | ISO 179/1eU |
| -22°F | No Break | | |
| 73°F | No Break | | |
| Notched Izod Impact Strength ⁵ | | | ISO 180/A |
| -22°F, Complete Break | 7.1 | ft·lb/in ² | |
| 73°F, Complete Break | 7.1 | ft·lb/in ² | |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load (66 psi, Unannealed) | 277 | °F | ISO 75-2/B |
| Deflection Temperature Under Load (264 psi, Unannealed) | 255 | °F | ISO 75-2/A |
| Vicat Softening Temperature | | | |
| -- | 289 | °F | ISO 306/B120 |
| -- | 286 | °F | ISO 306/B50 |
| CLTE - Flow (73 to 131°F) | 3.6E-5 | in/in/°F | ISO 11359-2 |
| CLTE - Transverse (73 to 131°F) | 3.6E-5 | in/in/°F | ISO 11359-2 |

Processing Information



| Injection | Nominal Value | Unit |
|------------------------------------|----------------------|-------------|
| Drying Temperature - Dry Air Dryer | 248 | °F |
| Drying Time - Dry Air Dryer | 2.0 to 3.0 | hr |
| Suggested Max Moisture | < 0.020 | % |
| Suggested Shot Size | 30 to 70 | % |
| Rear Temperature | 482 to 500 | °F |
| Middle Temperature | 518 to 536 | °F |
| Front Temperature | 536 to 554 | °F |
| Nozzle Temperature | 554 to 572 | °F |
| Processing (Melt) Temp | 536 to 608 | °F |
| Mold Temperature | 176 to 248 | °F |
| Back Pressure | 725 to 2180 | psi |
| Vent Depth | 9.8E-4 to 3.0E-3 | in |

Injection Notes

Hold Pressure (% of Injection Pressure): 50 - 75%
 Peripheral Screw Speed: 0.05 - 0.2 m/s
 Standard Melt Temperature: 300°C

Notes

- ¹ Typical properties: these are not to be construed as specifications.
- ² 60x60x2mm, 500 bar
- ³ 0.079 in/min
- ⁴ 2.0 mm/min
- ⁵ 3 mm

