

Bayblend® FR3009

 Covestro - Polycarbonates - *Polycarbonate + ABS*
General Information
Product Description

(PC+ABS)-Blend; flame retardant; Vicat/B 120 temperature = 103°C; UL recognition 94 5VB at 1.8 mm; successor to FR3000 BBS066; Improved hydrolysis resistance

General

| | | | |
|-----------------|------------------------|------------------------|-----------------|
| Material Status | • Commercial: Active | | |
| Availability | • Africa & Middle East | • Europe | • North America |
| | • Asia Pacific | • Latin America | |
| Additive | • Flame Retardant | | |
| Features | • Flame Retardant | • Hydrolysis Resistant | |
| RoHS Compliance | • RoHS Compliant | | |
| ISO Designation | • PC+ABS-FR(40) | | |

Properties ¹

| Physical | Nominal Value | Unit | Test Method |
|---|---------------|------------------------|--------------|
| Density (73°F) | 1.18 | g/cm ³ | ISO 1183 |
| Melt Volume-Flow Rate (MVR) (240°C/5.0 kg) | 25 | cm ³ /10min | ISO 1133 |
| Molding Shrinkage ² | | | ISO 2577 |
| Across Flow : 464°F, 0.118 in | 0.45 to 0.65 | % | |
| Flow : 464°F, 0.118 in | 0.45 to 0.65 | % | |
| Water Absorption (Saturation, 73°F) | 0.50 | % | ISO 62 |
| Water Absorption (Equilibrium, 73°F, 50% RH) | 0.20 | % | ISO 62 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus (73°F) | 406000 | psi | ISO 527-1/1 |
| Tensile Stress (Yield, 73°F) | 8700 | psi | ISO 527-2/50 |
| Tensile Stress (Break, 73°F) | 7250 | psi | ISO 527-2/50 |
| Tensile Strain (Yield, 73°F) | 4.0 | % | ISO 527-2/50 |
| Tensile Strain (Break, 73°F) | > 50 | % | ISO 527-2/50 |
| Impact | Nominal Value | Unit | Test Method |
| Notched Izod Impact Strength | | | ISO 180/A |
| -22°F | 3.8 | ft·lb/in ² | |
| 73°F | 5.7 | ft·lb/in ² | |
| Unnotched Izod Impact Strength (73°F) | No Break | | ISO 180 |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load (66 psi, Unannealed) | 203 | °F | ISO 75-2/B |
| Deflection Temperature Under Load (264 psi, Unannealed) | 185 | °F | ISO 75-2/A |
| Vicat Softening Temperature | | | |
| -- | 217 | °F | ISO 306/B120 |
| -- | 214 | °F | ISO 306/B50 |
| CLTE - Flow (73 to 131°F) | 4.2E-5 | in/in/°F | ISO 11359-2 |
| CLTE - Transverse (73 to 131°F) | 4.2E-5 | in/in/°F | ISO 11359-2 |
| Electrical | Nominal Value | Unit | Test Method |
| Surface Resistivity | 1.0E+16 | ohms | IEC 60093 |
| Volume Resistivity (73°F) | 1.0E+16 | ohms·cm | IEC 60093 |
| Electric Strength (73°F, 0.0394 in) | 760 | V/mil | IEC 60243-1 |
| Relative Permittivity | | | IEC 60250 |
| 73°F, 100 Hz | 3.10 | | |
| 73°F, 1 MHz | 3.10 | | |



| | | |
|---|---------------------------|--------------------|
| Dissipation Factor | | IEC 60250 |
| 73°F, 100 Hz | 5.0E-3 | |
| 73°F, 1 MHz | 7.0E-3 | |
| Comparative Tracking Index (Solution A) | 300 V | IEC 60112 |
| Flammability | Nominal Value Unit | Test Method |
| Flame Rating | | UL 94 |
| 0.06 in | V-0 | |
| 0.07 in | 5VB | |
| 0.12 in | 5VA | |
| Oxygen Index ³ | 33 % | ISO 4589-2 |
| Fill Analysis | Nominal Value Unit | Test Method |
| Melt Viscosity ⁴ (500°F) | 150 Pa·s | ISO 11443-A |

Processing Information

| Injection | Nominal Value Unit |
|------------------------------------|---------------------------|
| Drying Temperature - Dry Air Dryer | 176 °F |
| Drying Time - Dry Air Dryer | 4.0 hr |
| Suggested Max Moisture | < 0.020 % |
| Suggested Shot Size | 30 to 70 % |
| Rear Temperature | 428 to 446 °F |
| Middle Temperature | 437 to 455 °F |
| Front Temperature | 446 to 464 °F |
| Nozzle Temperature | 491 to 509 °F |
| Processing (Melt) Temp | 464 to 518 °F |
| Mold Temperature | 140 to 194 °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: 260°C

Notes

¹ Typical properties: these are not to be construed as specifications.

² 150x105x3mm,, MT 80°C

³ Procedure A

⁴ 1000s-1

