

# Bayblend® FR3009

FR grades / Non reinforced

(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

ISO Shortname

PC+ABS-FR(40)

| Property                                              | Test Condition                  | Unit       | Standard          | typical Value |
|-------------------------------------------------------|---------------------------------|------------|-------------------|---------------|
| <b>Rheological properties</b>                         |                                 |            |                   |               |
| C Melt volume-flow rate                               | 240 °C; 5 kg                    | cm³/10 min | ISO 1133          | 25            |
| Melt viscosity                                        | 1000 s⁻¹; 260 °C                | Pa·s       | b.o. ISO 11443-A  | 150           |
| Molding shrinkage, parallel                           | 150x105x3 mm; 240 °C / MT 80 °C | %          | b.o. ISO 2577     | 0.45 - 0.65   |
| Molding shrinkage, normal                             | 150x105x3 mm; 240 °C / MT 80 °C | %          | b.o. ISO 2577     | 0.45 - 0.65   |
| <b>Mechanical properties (23 °C/50 % r. h.)</b>       |                                 |            |                   |               |
| C Tensile modulus                                     | 1 mm/min                        | MPa        | ISO 527-1,-2      | 2800          |
| C Yield stress                                        | 50 mm/min                       | MPa        | ISO 527-1,-2      | 60            |
| C Yield strain                                        | 50 mm/min                       | %          | ISO 527-1,-2      | 4.0           |
| Stress at break                                       | 50 mm/min                       | MPa        | ISO 527-1,-2      | 50            |
| Strain at break                                       | 50 mm/min                       | %          | b.o. ISO 527-1,-2 | > 50          |
| Izod impact strength                                  | 23 °C                           | kJ/m²      | ISO 180-U         | N             |
| Izod notched impact strength                          | 23 °C                           | kJ/m²      | ISO 180-A         | 12            |
| Izod notched impact strength                          | -30 °C                          | kJ/m²      | ISO 180-A         | 8.0           |
| <b>Thermal properties</b>                             |                                 |            |                   |               |
| C Temperature of deflection under load                | 1.80 MPa                        | °C         | ISO 75-1,-2       | 85            |
| C Temperature of deflection under load                | 0.45 MPa                        | °C         | ISO 75-1,-2       | 95            |
| C Vicat softening temperature                         | 50 N; 50 °C/h                   | °C         | ISO 306           | 101           |
| Vicat softening temperature                           | 50 N; 120 °C/h                  | °C         | ISO 306           | 103           |
| C Coefficient of linear thermal expansion, parallel   | 23 to 55 °C                     | 10⁻⁴/K     | ISO 11359-1,-2    | 0.75          |
| C Coefficient of linear thermal expansion, transverse | 23 to 55 °C                     | 10⁻⁴/K     | ISO 11359-1,-2    | 0.75          |
| C Burning behavior UL 94 (1.5 mm) [UL recognition]    | 1.5 mm                          | Class      | UL 94             | V-0           |
| C Burning behavior UL 94-5V [UL recognition]          | 1.8 mm                          | Class      | UL 94             | 5VB           |
| Burning behavior UL 94-5V [UL recognition]            | 3.0 mm                          | Class      | UL 94             | 5VA           |
| <b>Electrical properties (23 °C/50 % r. h.)</b>       |                                 |            |                   |               |
| C Relative permittivity                               | 100 Hz                          | -          | IEC 60250         | 3.1           |
| C Relative permittivity                               | 1 MHz                           | -          | IEC 60250         | 3.1           |
| C Dissipation factor                                  | 100 Hz                          | 10⁻⁴       | IEC 60250         | 50            |
| C Dissipation factor                                  | 1 MHz                           | 10⁻⁴       | IEC 60250         | 70            |
| C Volume resistivity                                  |                                 | Ohm·m      | IEC 60093         | 1E14          |
| C Surface resistivity                                 |                                 | Ohm        | IEC 60093         | 1E16          |
| C Electrical strength                                 | 1 mm                            | kV/mm      | IEC 60243-1       | 30            |
| C Comparative tracking index CTI                      | Solution A                      | Rating     | IEC 60112         | 300           |
| <b>Other properties (23 °C)</b>                       |                                 |            |                   |               |
| C Water absorption (saturation value)                 | Water at 23 °C                  | %          | ISO 62            | 0.5           |
| C Water absorption (equilibrium value)                | 23 °C; 50 % r. h.               | %          | ISO 62            | 0.2           |
| C Density                                             |                                 | kg/m³      | ISO 1183-1        | 1180          |
| <b>Processing conditions for test specimens</b>       |                                 |            |                   |               |
| C Injection molding-Melt temperature                  |                                 | °C         | ISO 294           | 240           |
| C Injection molding-Mold temperature                  |                                 | °C         | ISO 294           | 80            |
| C Injection molding-Injection velocity                |                                 | mm/s       | ISO 294           | 240           |

C These property characteristics are taken from the CAMPUS plastics data bank and are based on the international catalogue of basic data for plastics according to ISO 10350.





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Impact properties: N = non-break, P = partial break, C = complete break





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## Disclaimer

Information Impact properties

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Typical value

These values are typical values only. Unless explicitly agreed in written form, the do not constitute a binding material specification or warranted values. Values may be affected by the design of the mold/die, the processing conditions and coloring/pigmentation of the product. Unless specified to the contrary, the property values given have been established on standardized test specimens at room temperature.

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Disclaimer Non Medical Grade

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