



# Bayblend® T90 XF

Standard grades / Non reinforced

(PC+ABS)-Blend; Vicat/B 120 temperature = 132 °C; good balance of melt flow, impact strength and stress cracking resistance

ISO Shortname

PC+ABS

| Property                                              | Test Condition                | Unit                    | Standard          | typical Value |
|-------------------------------------------------------|-------------------------------|-------------------------|-------------------|---------------|
| <b>Rheological properties</b>                         |                               |                         |                   |               |
| C Melt volume-flow rate                               | 260 °C/ 5 kg                  | cm <sup>3</sup> /10 min | ISO 1133          | 12            |
| Melt viscosity                                        | 1000 s <sup>-1</sup> / 260 °C | Pa·s                    | b.o. ISO 11443-A  | 260           |
| C Molding shrinkage, parallel                         | 60x60x2 mm/ 260 °C / MT 80 °C | %                       | ISO 294-4         | 0.6-0.8       |
| C Molding shrinkage, normal                           | 60x60x2 mm/ 260 °C / MT 80 °C | %                       | ISO 294-4         | 0.6-0.8       |
| <b>Mechanical properties (23 °C/50 % r. h.)</b>       |                               |                         |                   |               |
| C Tensile modulus                                     | 1 mm/min                      | MPa                     | ISO 527-1,-2      | 2200          |
| C Yield stress                                        | 50 mm/min                     | MPa                     | ISO 527-1,-2      | 53            |
| C Yield strain                                        | 50 mm/min                     | %                       | ISO 527-1,-2      | 5.1           |
| Stress at break                                       | 50 mm/min                     | MPa                     | ISO 527-1,-2      | 56            |
| Strain at break                                       | 50 mm/min                     | %                       | b.o. ISO 527-1,-2 | > 50          |
| Izod impact strength                                  | 23 °C                         | kJ/m <sup>2</sup>       | ISO 180-U         | N             |
| Izod impact strength                                  | -30 °C                        | kJ/m <sup>2</sup>       | ISO 180-U         | N             |
| Izod notched impact strength                          | 23 °C                         | kJ/m <sup>2</sup>       | ISO 180-A         | 55            |
| Izod notched impact strength                          | -30 °C                        | kJ/m <sup>2</sup>       | ISO 180-A         | 45            |
| C Puncture energy                                     | 23 °C                         | J                       | ISO 6603-2        | 44            |
| C Puncture energy                                     | -30 °C                        | J                       | ISO 6603-2        | 50            |
| <b>Thermal properties</b>                             |                               |                         |                   |               |
| C Temperature of deflection under load                | 1.80 MPa                      | °C                      | ISO 75-1,-2       | 107           |
| C Temperature of deflection under load                | 0.45 MPa                      | °C                      | ISO 75-1,-2       | 129           |
| C Vicat softening temperature                         | 50 N; 50 °C/h                 | °C                      | ISO 306           | 130           |
| Vicat softening temperature                           | 50 N; 120 °C/h                | °C                      | ISO 306           | 132           |
| C Coefficient of linear thermal expansion, parallel   | 23 to 55 °C                   | 10 <sup>-4</sup> /K     | ISO 11359-1,-2    | 0.7           |
| C Coefficient of linear thermal expansion, transverse | 23 to 55 °C                   | 10 <sup>-4</sup> /K     | ISO 11359-1,-2    | 0.75          |
| <b>Electrical properties (23 °C/50 % r. h.)</b>       |                               |                         |                   |               |
| C Relative permittivity                               | 100 Hz                        | -                       | IEC 60250         | 3.0           |
| C Relative permittivity                               | 1 MHz                         | -                       | IEC 60250         | 2.9           |
| C Dissipation factor                                  | 100 Hz                        | 10 <sup>-4</sup>        | IEC 60250         | 25            |
| C Dissipation factor                                  | 1 MHz                         | 10 <sup>-4</sup>        | IEC 60250         | 95            |
| 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       | 35            |
| C Comparative tracking index CTI                      | Solution A                    | Rating                  | IEC 60112         | 200           |
| <b>Other properties (23 °C)</b>                       |                               |                         |                   |               |
| C Water absorption (saturation value)                 | Water at 23 °C                | %                       | ISO 62            | 0.6           |
| C Water absorption (equilibrium value)                | 23 °C; 50 % r. h.             | %                       | ISO 62            | 0.2           |
| C Density                                             |                               | kg/m <sup>3</sup>       | ISO 1183-1        | 1140          |
| <b>Processing conditions for test specimens</b>       |                               |                         |                   |               |
| C Injection molding-Melt temperature                  |                               | °C                      | ISO 294           | 260           |
| C Injection molding-Mold temperature                  |                               | °C                      | ISO 294           | 80            |
| C Injection molding-Injection velocity                |                               | mm/s                    | ISO 294           | 240           |





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| Property                                     | Test Condition | Unit | Standard | typical Value |
|----------------------------------------------|----------------|------|----------|---------------|
| Recommended Processing and Drying Conditions |                |      |          |               |
| Melt Temperatures                            |                | °C   | -        | 260 - 280     |
| Standard Melt Temperature                    |                | °C   | -        | 270           |
| Barrel Temperatures - Rear                   |                | °C   | -        | 230 - 240     |
| Barrel Temperatures - Middle                 |                | °C   | -        | 235 - 245     |
| Barrel Temperatures - Front                  |                | °C   | -        | 240 - 270     |
| Barrel Temperatures - Nozzle                 |                | °C   | -        | 265 - 275     |
| Mold Temperatures                            |                | °C   | -        | 70 - 90       |
| Hold Pressure (% of injection pressure)      |                | %    | -        | 50 - 75       |
| Plastic Back Pressure (specific)             |                | bar  | -        | 50 - 150      |
| Peripheral Screw Speed                       |                | m/s  | -        | 0.05 - 0.2    |
| Shot-to-Cylinder Size                        |                | %    | -        | 30 - 70       |
| Dry Air Drying Temperature                   |                | °C   | -        | 95 - 110      |
| Dry Air Drying Time                          |                | h    | -        | 4             |
| Moisture Content max. (%)                    |                | %    | -        | <= 0,02       |
| Vent Depth                                   |                | mm   | -        | 0.025 - 0.075 |

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.

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

