

SABIC[®] PC RESIN PC0700

REGION ASIA

DESCRIPTION

PC0700 resin is a low flow (MFR = 7 at 300°C/1.2kg), heat stabilized, polycarbonate product designed for use in the custom compounding market. It does not contain UV stabilizer or mold release. It is available exclusively at www.sabicpc.com.

TYPICAL PROPERTY VALUES

Revision 20181012

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------------------|----------------|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 50 mm/min | 63 | MPa | ASTM D 638 |
| Tensile Strain, yld, Type I, 50 mm/min | 6 | % | ASTM D 638 |
| Tensile Strain, brk, Type I, 50 mm/min | >70 | % | ASTM D 638 |
| Tensile Modulus, 50 mm/min | 2350 | MPa | ASTM D 638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 90 | MPa | ASTM D 790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2300 | MPa | ASTM D 790 |
| Hardness, Rockwell R | 120 | - | ASTM D 785 |
| Tensile Stress, yield, 50 mm/min | 63 | MPa | ISO 527 |
| Tensile Strain, yield, 50 mm/min | 6 | % | ISO 527 |
| Tensile Strain, break, 50 mm/min | >70 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 2350 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 90 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 2300 | MPa | ISO 178 |
| Hardness, Rockwell R | 120 | - | ISO 2039-2 |
| IMPACT | | | |
| Izod Impact, unnotched, 23°C | NB | J/m | ASTM D 4812 |
| Izod Impact, notched, 23°C | 900 | J/m | ASTM D 256 |
| Instrumented Impact Energy @ peak, 23°C | 65 | J | ASTM D 3763 |
| Izod Impact, unnotched 80*10*3 +23°C | NB | kJ/m ² | ISO 180/1U |
| Izod Impact, unnotched 80*10*3 -30°C | NB | kJ/m ² | ISO 180/1U |
| Izod Impact, notched 80*10*3 +23°C | 70 | kJ/m ² | ISO 180/1A |
| Izod Impact, notched 80*10*3 -30°C | 12 | kJ/m ² | ISO 180/1A |
| THERMAL | | | |
| Vicat Softening Temp, Rate B/50 | 144 | °C | ASTM D 1525 |
| HDT, 0.45 MPa, 3.2 mm | 138 | °C | ASTM D 648 |
| HDT, 1.82 MPa, 3.2 mm | 127 | °C | ASTM D 648 |
| CTE, -40°C to 95°C, flow | 7.E-05 | 1/°C | ASTM E 831 |
| Thermal Conductivity | 0.2 | W/m.°C | ASTM C 177 |
| Thermal Conductivity | 0.2 | W/m.°C | ISO 8302 |
| CTE, 23°C to 80°C, flow | 7.E-05 | 1/°C | ISO 11359-2 |
| Ball Pressure Test, 125°C +/- 2°C | Passes | - | IEC 60695-10-2 |
| Vicat Softening Temp, Rate B/50 | 144 | °C | ISO 306 |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|----------------|-------------------------|--------------|
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 138 | °C | ISO 75 /Bf |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 127 | °C | ISO 75 /Af |
| PHYSICAL | | | |
| Specific Gravity | 1.2 | - | ASTM D 792 |
| Water Absorption, equilibrium, 23C | 0.35 | % | ASTM D 570 |
| Mold Shrinkage on Tensile Bar, flow | 0.5 – 0.7 | % | SABIC method |
| Mold Shrinkage, flow, 3.2 mm | 0.5 – 0.7 | % | SABIC method |
| Melt Flow Rate, 300°C/1.2 kgf | 7 | g/10 min | ASTM D 1238 |
| Density | 1.2 | g/cm ³ | ISO 1183 |
| Water Absorption, (23°C/sat) | 0.35 | % | ISO 62 |
| Melt Volume Rate, MVR at 300°C/1.2 kg | 6 | cm ³ /10 min | ISO 1133 |
| OPTICAL | | | |
| Light Transmission, 2.54 mm | 88 – 90 | % | ASTM D 1003 |
| Haze, 2.54 mm | <0.8 | % | ASTM D 1003 |
| Refractive Index | 1.586 | - | ASTM D542 |
| Refractive Index | 1.586 | - | ISO 489 |
| ELECTRICAL | | | |
| Volume Resistivity | >1.E+15 | Ohm-cm | ASTM D 257 |
| Dielectric Strength, 1.6 mm | 27 | kV/mm | ASTM D 149 |
| Relative Permittivity, 60 Hz | 3 | - | ASTM D 150 |
| Relative Permittivity, 1 MHz | 3 | - | ASTM D 150 |
| Dissipation Factor, 60 Hz | 0.001 | - | ASTM D 150 |
| Dissipation Factor, 1 MHz | 0.01 | - | ASTM D 150 |
| Volume Resistivity | >1.E+15 | Ohm-cm | IEC 60093 |
| Dielectric Strength, 1.6 mm | 27 | kV/mm | IEC 60243-1 |
| Relative Permittivity, 60 Hz | 3 | - | IEC 60250 |
| Relative Permittivity, 1 MHz | 3 | - | IEC 60250 |
| Dissipation Factor, 60 Hz | 0.001 | - | IEC 60250 |
| Dissipation Factor, 1 MHz | 0.01 | - | IEC 60250 |
| FLAME CHARACTERISTICS | | | |
| UL Recognized, 94V-2 Flame Class Rating | 1.5 | mm | UL 94 |
| INJECTION MOLDING | | | |
| Drying Temperature | 120 | °C | |
| Drying Time | 2 – 4 | hrs | |
| Maximum Moisture Content | 0.02 | % | |
| Melt Temperature | 290 – 320 | °C | |
| Nozzle Temperature | 280 – 310 | °C | |
| Front - Zone 3 Temperature | 290 – 320 | °C | |
| Middle - Zone 2 Temperature | 280 – 310 | °C | |
| Rear - Zone 1 Temperature | 270 – 300 | °C | |
| Hopper Temperature | 60 – 80 | °C | |
| Mold Temperature | 80 – 120 | °C | |



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