

SABIC XENOY™ PBT/PC X4850物性表

| 属性 | 典型值 | UNITS | 测试手段 |
|--|------|-----------|--------------|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 50 mm/min | 65 | MPa | ASTM D638 |
| Tensile Stress, brk, Type I, 50 mm/min | 55 | MPa | ASTM D638 |
| Tensile Stress, yld, Type I, 5 mm/min | 58 | MPa | ASTM D638 |
| Tensile Stress, brk, Type I, 5 mm/min | 60 | MPa | ASTM D638 |
| Tensile Strain, yld, Type I, 50 mm/min | 3.7 | % | ASTM D638 |
| Tensile Strain, brk, Type I, 50 mm/min | 130 | % | ASTM D638 |
| Tensile Strain, yld, Type I, 5 mm/min | 3.8 | % | ASTM D638 |
| Tensile Strain, brk, Type I, 5 mm/min | 140 | % | ASTM D638 |
| Tensile Modulus, 5 mm/min | 4000 | MPa | ASTM D638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 99 | MPa | ASTM D790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 3700 | MPa | ASTM D790 |
| Taber Abrasion, CS-17, 1 kg | 30 | mg/1000cy | SABIC method |
| Tensile Stress, yield, 5 mm/min | 58 | MPa | ISO 527 |
| Tensile Stress, break, 5 mm/min | 50 | MPa | ISO 527 |
| Tensile Stress, yield, 50 mm/min | 63 | MPa | ISO 527 |
| Tensile Stress, break, 50 mm/min | 45 | MPa | ISO 527 |
| Tensile Strain, yield, 5 mm/min | 3.4 | % | ISO 527 |
| Tensile Strain, break, 5 mm/min | 80 | % | ISO 527 |
| Tensile Strain, yield, 50 mm/min | 3.5 | % | ISO 527 |
| Tensile Strain, break, 50 mm/min | 30 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 3850 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 94 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 3500 | MPa | ISO 178 |
| Ball Indentation Hardness, H358/30 | 105 | MPa | ISO 2039-1 |

| IMPACT | | | |
|---|---------|-------------------|-------------|
| Izod Impact, notched, 23°C | 180 | J/m | ASTM D256 |
| Izod Impact, notched, 0°C | 120 | J/m | ASTM D256 |
| Izod Impact, notched, -30°C | 100 | J/m | ASTM D256 |
| Multiaxial Impact | 100 | J | ISO 6603 |
| Instrumented Dart Impact Total Energy, 23°C | 60 | J | ASTM D3763 |
| Instrumented Impact Total Energy, -20°C | 60 | J | ASTM D3763 |
| Izod Impact, unnotched 80*10*4 +23°C | NB | kJ/m ² | ISO 180/1U |
| Izod Impact, unnotched 80*10*4 -30°C | NB | kJ/m ² | ISO 180/1U |
| Izod Impact, notched 80*10*4 +23°C | 20 | kJ/m ² | ISO 180/1A |
| Izod Impact, notched 80*10*4 0°C | 11 | kJ/m ² | ISO 180/1A |
| Izod Impact, notched 80*10*4 -30°C | 7 | kJ/m ² | ISO 180/1A |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm | 20 | kJ/m ² | ISO 179/1eA |
| Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm | 11 | kJ/m ² | ISO 179/1eA |
| Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm | NB | kJ/m ² | ISO 179/1eU |
| Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm | NB | kJ/m ² | ISO 179/1eU |
| THERMAL | | | |
| Vicat Softening Temp, Rate B/50 | 134 | °C | ASTM D1525 |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 125 | °C | ASTM D648 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 101 | °C | ASTM D648 |
| CTE, -40°C to 40°C, flow | 5.2E-05 | 1/°C | ASTM E831 |
| CTE, -40°C to 40°C, xflow | 7.5E-05 | 1/°C | ASTM E831 |
| Thermal Conductivity | 0.2 | W/m-°C | ISO 8302 |
| CTE, -30°C to 80°C, flow | 6.3E-05 | 1/°C | ISO 11359-2 |
| CTE, -30°C to 80°C, xflow | 8.1E-05 | 1/°C | ISO 11359-2 |
| Vicat Softening Temp, Rate B/50 | 133 | °C | ISO 306 |
| Vicat Softening Temp, Rate B/120 | 135 | °C | ISO 306 |

| | | | |
|---|---------|-------------------------|--------------|
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 121 | °C | ISO 75/Bf |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 99 | °C | ISO 75/Af |
| PHYSICAL | | | |
| Specific Gravity | 1.31 | - | ASTM D792 |
| Mold Shrinkage, flow, 3.2 mm | 0.7-0.9 | % | SABIC method |
| Melt Flow Rate, 266°C/5.0 kgf | 4.5 | g/10 min | ASTM D1238 |
| Density | 1.31 | g/cm ³ | ISO 1183 |
| Water Absorption, (23°C/saturated) | 0.42 | % | ISO 62-1 |
| Moisture Absorption (23°C / 50% RH) | 0.14 | % | ISO 62 |
| Melt Volume Rate, MVR at 265°C/5.0 kg | 4 | cm ³ /10 min | ISO 1133 |
| Injection Molding | | | |
| Drying Temperature | 90-100 | °C | |
| Drying Time | 2-4 | Hrs | |
| Maximum Moisture Content | 0.02 | % | |
| Melt Temperature | 255-270 | °C | |
| Nozzle Temperature | 250-265 | °C | |
| Front - Zone 3 Temperature | 250-270 | °C | |
| Middle - Zone 2 Temperature | 240-265 | °C | |
| Rear - Zone 1 Temperature | 230-250 | °C | |
| Hopper Temperature | 40-60 | °C | |
| Mold Temperature | 60-80 | °C | |

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