# XENOY™ RESIN X4830

REGION ASIA

## DESCRIPTION

XENOY X4830 is a hydrostable, high modulus, low temperature ductile PC/PBT blend. Furthermore, this resin provides high chemical resistance, very low creep, low CTE, excellent fatique and high heat dimensional stability. The X4830 could be positioned for body panels, safety equipment, housings, doorhandles, spring-loaded applications, medical device enclosures, outdoor sports equipment.

## TYPICAL PROPERTY VALUES

Revision 20191023

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 50 mm/min | 60 | MPa | ASTM D 638 |
| Tensile Stress, brk, Type I, 50 mm/min | 60 | MPa | ASTM D 638 |
| Tensile Stress, yld, Type I, 5 mm/min | 56 | MPa | ASTM D 638 |
| Tensile Stress, brk, Type I, 5 mm/min | 60 | MPa | ASTM D 638 |
| Tensile Strain, yld, Type I, 50 mm/min | 4.1 | % | ASTM D 638 |
| Tensile Strain, brk, Type I, 50 mm/min | 140 | % | ASTM D 638 |
| Tensile Strain, yld, Type I, 5 mm/min | 4.5 | % | ASTM D 638 |
| Tensile Strain, brk, Type I, 5 mm/min | 150 | % | ASTM D 638 |
| Tensile Modulus, 5 mm/min | 3400 | MPa | ASTM D 638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 96 | MPa | ASTM D 790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 3100 | MPa | ASTM D 790 |
| Taber Abrasion, CS-17, 1 kg | 30 | mg/1000cy | SABIC method |
| Tensile Stress, yield, 5 mm/min | 55 | MPa | ISO 527 |
| Tensile Stress, break, 5 mm/min | 60 | MPa | ISO 527 |
| Tensile Stress, yield, 50 mm/min | 61 | MPa | ISO 527 |
| Tensile Stress, break, 50 mm/min | 55 | MPa | ISO 527 |
| Tensile Strain, yield, 5 mm/min | 4.1 | % | ISO 527 |
| Tensile Strain, break, 5 mm/min | 120 | % | ISO 527 |
| Tensile Strain, yield, 50 mm/min | 4.2 | % | ISO 527 |
| Tensile Strain, break, 50 mm/min | 110 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 3200 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 90 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 2900 | MPa | ISO 178 |
| Ball Indentation Hardness, H358/30 | 105 | MPa | ISO 2039-1 |
| IMPACT | | | |
| Izod Impact, notched, 23°C | 600 | J/m | ASTM D 256 |
| Izod Impact, notched, 0°C | 150 | J/m | ASTM D 256 |
| Izod Impact, notched, -30°C | 120 | J/m | ASTM D 256 |
| Multiaxial Impact | 110 | J | ISO 6603 |
| Instrumented Impact Total Energy, 23°C | 70 | J | ASTM D 3763 |
| Instrumented Impact Total Energy, -20°C | 70 | J | ASTM D 3763 |
| Izod Impact, unnotched 80*10*4 +23°C | NB | kJ/m² | ISO 180/1U |
| Izod Impact, unnotched 80*10*4 -30°C | NB | kJ/m² | ISO 180/1U |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| Izod Impact, notched 80*10*4 +23°C | 45 | kJ/m² | ISO 180/1A |
| Izod Impact, notched 80*10*4 0°C | 15 | kJ/m² | ISO 180/1A |
| Izod Impact, notched 80*10*4 -30°C | 9 | kJ/m² | ISO 180/1A |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm | 40 | kJ/m² | ISO 179/1eA |
| Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm | 12 | kJ/m² | ISO 179/1eA |
| Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm | NB | kJ/m² | ISO 179/1eU |
| Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm | NB | kJ/m² | ISO 179/1eU |
| THERMAL | | | |
| Vicat Softening Temp, Rate B/50 | 133 | °C | ASTM D 1525 |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 125 | °C | ASTM D 648 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 106 | °C | ASTM D 648 |
| CTE, -40°C to 40°C, flow | 6.E-05 | 1/°C | ASTM E 831 |
| CTE, -40°C to 40°C, xflow | 8.2E-05 | 1/°C | ASTM E 831 |
| Thermal Conductivity | 0.2 | W/m·°C | ISO 8302 |
| CTE, -30°C to 80°C, flow | 7.2E-05 | 1/°C | ISO 11359-2 |
| CTE, -30°C to 80°C, xflow | 9.E-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 | 119 | °C | ISO 75/Bf |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 97 | °C | ISO 75/Af |
| PHYSICAL | | | |
| Specific Gravity | 1.27 | - | ASTM D 792 |
| Mold Shrinkage, flow, 3.2 mm | 0.7 – 0.9 | % | SABIC method |
| Melt Flow Rate, 266°C/5.0 kgf | 7 | g/10 min | ASTM D 1238 |
| Density | 1.27 | g/cm³ | ISO 1183 |
| Water Absorption, (23°C/sat) | 0.42 | % | ISO 62 |
| Moisture Absorption (23°C / 50% RH) | 0.14 | % | ISO 62 |
| Melt Volume Rate, MVR at 265°C/5.0 kg | 6 | cm³/10 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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