# XENOY™ RESIN CL101

REGION ASIA

## DESCRIPTION

Xenoy CL101 is an unfilled, impact modified PC/PBT blend with excellent solvent resistance and low-temperature ductility. It has a proven track record in off-line painted exterior automotive applications. ISO1043: PC+PBT-I.

## TYPICAL PROPERTY VALUES

Revision 20190925

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 50 mm/min | 53 | MPa | ASTM D 638 |
| Tensile Stress, brk, Type I, 50 mm/min | 49 | MPa | ASTM D 638 |
| Tensile Strain, yld, Type I, 50 mm/min | 4.5 | % | ASTM D 638 |
| Tensile Strain, brk, Type I, 50 mm/min | 50 | % | ASTM D 638 |
| Tensile Modulus, 50 mm/min | 2050 | MPa | ASTM D 638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 75 | MPa | ASTM D 790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2000 | MPa | ASTM D 790 |
| Taber Abrasion, CS-17, 1 kg | 30 | mg/1000cy | SABIC method |
| Tensile Stress, yield, 50 mm/min | 52 | MPa | ISO 527 |
| Tensile Stress, break, 50 mm/min | 44 | MPa | ISO 527 |
| Tensile Strain, yield, 50 mm/min | 4.5 | % | ISO 527 |
| Tensile Strain, break, 50 mm/min | 50 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 2050 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 75 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 2000 | MPa | ISO 178 |
| Ball Indentation Hardness, H358/30 | 82 | MPa | ISO 2039-1 |
| Hardness, Rockwell L | 89 | - | ISO 2039-2 |
| IMPACT | | | |
| Izod Impact, notched, 23°C | 625 | J/m | ASTM D 256 |
| Izod Impact, notched, 0°C | 600 | J/m | ASTM D 256 |
| Izod Impact, notched, -30°C | 450 | J/m | ASTM D 256 |
| Instrumented Impact Total Energy, 23°C | 50 | 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 |
| Izod Impact, notched 80*10*4 +23°C | 50 | kJ/m² | ISO 180/1A |
| Izod Impact, notched 80*10*4 -30°C | 35 | kJ/m² | ISO 180/1A |
| Izod Impact, notched 80*10*4 -40°C | 25 | kJ/m² | ISO 180/1A |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm | 58 | kJ/m² | ISO 179/1eA |
| Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm | 25 | 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 | 120 | °C | ASTM D 1525 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 83 | °C | ASTM D 648 |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| CTE, -40°C to 40°C, flow | 9.E-05 | 1/°C | ASTM E 831 |
| CTE, -40°C to 40°C, xflow | 9.5E-05 | 1/°C | ASTM E 831 |
| Thermal Conductivity | 0.18 | W/m-°C | ISO 8302 |
| CTE, 23°C to 80°C, flow | 9.E-05 | 1/°C | ISO 11359-2 |
| CTE, 23°C to 80°C, xflow | 9.5E-05 | 1/°C | ISO 11359-2 |
| Ball Pressure Test, 75°C +/- 2°C | PASSES | - | IEC 60695-10-2 |
| Vicat Softening Temp, Rate A/50 | 155 | °C | ISO 306 |
| Vicat Softening Temp, Rate B/50 | 120 | °C | ISO 306 |
| Vicat Softening Temp, Rate B/120 | 123 | °C | ISO 306 |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 105 | °C | ISO 75/Bf |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 83 | °C | ISO 75/Af |
| PHYSICAL | | | |
| Specific Gravity | 1.22 | - | ASTM D 792 |
| Mold Shrinkage, flow, 3.2 mm | 0.7 – 1.1 | % | SABIC method |
| Melt Flow Rate, 250°C/5.0 kgf | 14 | g/10 min | ASTM D 1238 |
| Density | 1.22 | g/cm³ | ISO 1183 |
| Water Absorption, (23°C/sat) | 0.5 | % | ISO 62 |
| Moisture Absorption (23°C / 50% RH) | 0.15 | % | ISO 62 |
| Melt Volume Rate, MVR at 250°C/5.0 kg | 13 | cm³/10 min | ISO 1133 |
| ELECTRICAL | | | |
| Volume Resistivity | >1.E+14 | Ohm-cm | IEC 60093 |
| Surface Resistivity, ROA | >1.E+15 | Ohm | IEC 60093 |
| Dielectric Strength, shorttime, 1.0mm | 18 | kV/mm | IEC 60243-1 |
| Dielectric Strength, in oil, 3.2 mm | 17 | kV/mm | IEC 60243-1 |
| Relative Permittivity, 1 MHz | 3.3 | - | IEC 60250 |
| Dissipation Factor, 50/60 Hz | 0.002 | - | IEC 60250 |
| Dissipation Factor, 1 MHz | 0.02 | - | IEC 60250 |
| Relative Permittivity, 50/60 Hz | 3.3 | - | IEC 60250 |
| FLAME CHARACTERISTICS | | | |
| UL Compliant, 94HB Flame Class Rating | 1.5 | mm | UL 94 by SABIC-IP |
| 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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