# XYLEX™ RESIN X8519

REGION AMERICAS

## DESCRIPTION

PC+POLYESTER, Injection Molding Transparency

## TYPICAL PROPERTY VALUES

Revision 20190925

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 50 mm/min | 57 | MPa | ASTM D 638 |
| Tensile Stress, brk, Type I, 50 mm/min | 45 | MPa | ASTM D 638 |
| Tensile Strain, yld, Type I, 50 mm/min | 6 | % | ASTM D 638 |
| Tensile Strain, brk, Type I, 50 mm/min | 91 | % | ASTM D 638 |
| Tensile Modulus, 50 mm/min | 2000 | MPa | ASTM D 638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 83 | MPa | ASTM D 790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2170 | MPa | ASTM D 790 |
| Tensile Stress, yield, 50 mm/min | 56 | MPa | ISO 527 |
| Tensile Stress, break, 50 mm/min | 52 | MPa | ISO 527 |
| Tensile Strain, yield, 50 mm/min | 6 | % | ISO 527 |
| Tensile Strain, break, 50 mm/min | 118 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 1940 | MPa | ISO 527 |
| Flexural Stress, break, 2 mm/min | 85 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 1900 | MPa | ISO 178 |
| IMPACT | | | |
| Izod Impact, notched, 23°C | 483 | J/m | ASTM D 256 |
| Izod Impact, notched, -30°C | 35 | J/m | ASTM D 256 |
| Instrumented Impact Total Energy, 23°C | 67 | J | ASTM D 3763 |
| Izod Impact, notched 80*10*4 +23°C | 14 | kJ/m² | ISO 180/1A |
| Izod Impact, notched 80*10*4 -10°C | 7 | kJ/m² | ISO 180/1A |
| Izod Impact, notched 80*10*4 -30°C | 6 | kJ/m² | ISO 180/1A |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm | 22 | kJ/m² | ISO 179/1eA |
| THERMAL | | | |
| Vicat Softening Temp, Rate B/50 | 112 | °C | ASTM D 1525 |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 107 | °C | ASTM D 648 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 95 | °C | ASTM D 648 |
| CTE, -40°C to 40°C, flow | 6.46E-05 | 1/°C | ASTM E 831 |
| CTE, -40°C to 40°C, xflow | 6.48E-05 | 1/°C | ASTM E 831 |
| CTE, -40°C to 40°C, flow | 6.4E-06 | 1/°C | ISO 11359-2 |
| CTE, -40°C to 40°C, xflow | 6.38E-05 | 1/°C | ISO 11359-2 |
| CTE, 23°C to 60°C, flow | 6.47E-05 | 1/°C | ISO 11359-2 |
| CTE, 23°C to 60°C, xflow | 6.66E-05 | 1/°C | ISO 11359-2 |
| Vicat Softening Temp, Rate B/50 | 113 | °C | ISO 306 |
| Vicat Softening Temp, Rate B/120 | 116 | °C | ISO 306 |
| HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm | 97 | °C | ISO 75/Ae |

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|---|---|---|---|
| PHYSICAL | | | |
| Specific Gravity | 1.21 | - | ASTM D 792 |
| Mold Shrinkage, flow, 3.2 mm | 0.47 | % | SABIC method |
| Mold Shrinkage, xflow, 3.2 mm | 0.48 | % | SABIC method |
| Melt Flow Rate, 265°C/2.16kgf | 13 | g/10 min | ASTM D 1238 |
| Density | 1.21 | g/cm³ | ISO 1183 |
| Moisture Absorption (23°C / 50% RH) | 0.23 | % | ISO 62 |
| Melt Volume Rate, MVR at 265°C/2.16 kg | 12 | cm³/10 min | ISO 1133 |
| OPTICAL | | | |
| Light Transmission, 2.54 mm | 87 | % | ASTM D 1003 |
| Haze, 2.54 mm | 0.3 | % | ASTM D 1003 |
| INJECTION MOLDING | | | |
| Drying Temperature | 65 – 75 | °C | |
| Drying Time | 3 – 5 | hrs | |
| Drying Time (Cumulative) | 8 | hrs | |
| Maximum Moisture Content | 0.02 | % | |
| Melt Temperature | 245 – 265 | °C | |
| Nozzle Temperature | 245 – 265 | °C | |
| Front - Zone 3 Temperature | 245 – 265 | °C | |
| Middle - Zone 2 Temperature | 240 – 260 | °C | |
| Rear - Zone 1 Temperature | 240 – 250 | °C | |
| Mold Temperature | 45 – 60 | °C | |
| Back Pressure | 0.2 – 0.5 | MPa | |
| Screw Speed | 20 – 100 | rpm | |
| Shot to Cylinder Size | 40 – 80 | % | |
| Vent Depth | 0.013 – 0.02 | mm | |

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