# LEXAN™ COPOLYMER XHT3141

REGION AMERICAS

## DESCRIPTION

XHT3141 is a high flow, high heat polycarbonate copolymer. It is available in a range of opaque and limited transparent colors.

## TYPICAL PROPERTY VALUES

Revision 20260202

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 50 mm/min | 70 | MPa | ASTM D638 |
| Tensile Stress, brk, Type I, 50 mm/min | 55 | MPa | ASTM D638 |
| Tensile Strain, yld, Type I, 50 mm/min | 6 | % | ASTM D638 |
| Tensile Strain, brk, Type I, 50 mm/min | 70 | % | ASTM D638 |
| Tensile Modulus, 5 mm/min | 2700 | MPa | ASTM D638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 120 | MPa | ASTM D790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2600 | MPa | ASTM D790 |
| Tensile Stress, yield, 50 mm/min | 70 | MPa | ISO 527 |
| Tensile Stress, break, 50 mm/min | 60 | 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 | 2500 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 80 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 2500 | MPa | ISO 178 |
| IMPACT | | | |
| Izod Impact, notched, 23°C | 97 | J/m | ASTM D256 |
| Izod Impact, notched, -30°C | 55 | J/m | ASTM D256 |
| Instrumented Dart Impact Total Energy, 23°C | 68 | J | ASTM D3763 |
| Izod Impact, unnotched 80*10*3 +23°C | NB | kJ/m² | ISO 180/1U |
| Izod Impact, unnotched 80*10*3 -30°C | NB | kJ/m² | ISO 180/1U |
| Izod Impact, notched 80*10*3 +23°C | 9 | kJ/m² | ISO 180/1A |
| Izod Impact, notched 80*10*3 -30°C | 9 | kJ/m² | ISO 180/1A |
| Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm | 11 | kJ/m² | ISO 179/1eA |
| Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm | 9 | kJ/m² | ISO 179/1eA |
| Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm | NB | kJ/m² | ISO 179/1eU |
| Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm | NB | kJ/m² | ISO 179/1eU |
| THERMAL | | | |
| Vicat Softening Temp, Rate B/50 | 170 | °C | ASTM D1525 |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 166 | °C | ASTM D648 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 156 | °C | ASTM D648 |
| CTE, -40°C to 40°C, flow | 6.E-05 | 1/°C | ASTM E831 |
| CTE, -40°C to 40°C, xflow | 6.E-05 | 1/°C | ASTM E831 |
| Thermal Conductivity @ 25 °C | 0.2 | W/m-°C | ASTM C177 |
| CTE, -40°C to 40°C, flow | 6.E-05 | 1/°C | ISO 11359-2 |
| CTE, -40°C to 40°C, xflow | 6.E-05 | 1/°C | ISO 11359-2 |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| Ball Pressure Test, 125°C +/- 2°C | Passes | - | IEC 60695-10-2 |
| Vicat Softening Temp, Rate B/50 | 168 | °C | ISO 306 |
| Vicat Softening Temp, Rate B/120 | 170 | °C | ISO 306 |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 164 | °C | ISO 75/Bf |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 152 | °C | ISO 75/Af |
| Relative Temp Index, Elec | 150 | °C | UL 746B |
| Relative Temp Index, Mech w/impact [1] | 130 | °C | UL 746B |
| Relative Temp Index, Mech w/o impact [1] | 150 | °C | UL 746B |
| Metallized Haze Onset [1] | 165 | °C | SABIC method |
| PHYSICAL | | | |
| Specific Gravity | 1.2 | - | ASTM D792 |
| Mold Shrinkage, flow, 3.2 mm | 0.6 – 0.9 | % | SABIC method |
| Melt Flow Rate, 330°C/2.16 kgf | 33 | g/10 min | ASTM D1238 |
| Density | 1.2 | g/cm³ | ISO 1183 |
| Water Absorption, (23°C/saturated) | 0.3 | % | ISO 62-1 |
| Moisture Absorption (23°C / 50% RH) | 0.3 | % | ISO 62 |
| Melt Volume Rate, MVR at 330°C/2.16kg | 30 | cm³/10 min | ISO 1133 |
| ELECTRICAL | | | |
| Volume Resistivity | >1.E+17 | Ω.cm | ASTM D257 |
| Surface Resistivity | >1.E+17 | Ω | ASTM D257 |
| Dielectric Strength, in oil, 3.2 mm | 23 | kV/mm | ASTM D149 |
| Relative Permittivity, 100 Hz | 2.9 | - | ASTM D150 |
| Relative Permittivity, 1 MHz | 2.8 | - | ASTM D150 |
| Dissipation Factor, 100 Hz | 0.031 | - | ASTM D150 |
| Dissipation Factor, 1 MHz | 0.011 | - | ASTM D150 |
| Comparative Tracking Index (UL) {PLC} | 3 | PLC Code | UL 746A |
| Hot-Wire Ignition (HWI), PLC 3 | 1.5 | mm | UL 746A |
| High Amp Arc Ignition (HAI), PLC 0 | 1.5 | mm | UL 746A |
| FLAME CHARACTERISTICS [1] | | | |
| UL Yellow Card Link | E121562-100052926 | - | - |
| UL Recognized, 94HB Flame Class Rating | ≥1.5 | mm | UL 94 |
| Glow Wire Ignitability Temperature, 3.0 mm | 875 | °C | IEC 60695-2-13 |
| Glow Wire Flammability Index, 3.0 mm | 960 | °C | IEC 60695-2-12 |
| Glow Wire Flammability Index, 2.0 mm | 960 | °C | IEC 60695-2-12 |
| Glow Wire Flammability Index, 1.0 mm | 960 | °C | IEC 60695-2-12 |
| INJECTION MOLDING | | | |
| Drying Temperature | 135 | °C | |
| Drying Time | 4 – 6 | Hrs | |
| Maximum Moisture Content | 0.02 | % | |
| Melt Temperature | 290 – 350 | °C | |
| Nozzle Temperature | 285 – 345 | °C | |
| Front - Zone 3 Temperature | 290 – 350 | °C | |
| Middle - Zone 2 Temperature | 280 – 340 | °C | |
| Rear - Zone 1 Temperature | 270 – 330 | °C | |
| Mold Temperature | 95 – 130 | °C | |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| **Back Pressure** | 0.3 – 0.7 | MPa | |
| **Screw Speed** | 40 – 90 | rpm | |
| **Shot to Cylinder Size** | 40 – 60 | % | |
| **Vent Depth** | 0.025 – 0.08 | mm | |

(1) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

## MORE INFORMATION

For curve data and CAE cards, please visit and register at https://materialfinder.sabic-specialties.com

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