

# LEXANT™ COPOLYMER XHT3141

REGION ASIA

## 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 20231130

| PROPERTIES                                   | TYPICAL VALUES | UNITS             | TEST METHODS |
|----------------------------------------------|----------------|-------------------|--------------|
| <b>MECHANICAL</b>                            |                |                   |              |
| 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      |
| <b>IMPACT</b>                                |                |                   |              |
| 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/m <sup>2</sup> | ISO 180/1U   |
| Izod Impact, unnotched 80*10*3 -30°C         | NB             | kJ/m <sup>2</sup> | ISO 180/1U   |
| Izod Impact, notched 80*10*3 +23°C           | 9              | kJ/m <sup>2</sup> | ISO 180/1A   |
| Izod Impact, notched 80*10*3 -30°C           | 9              | kJ/m <sup>2</sup> | ISO 180/1A   |
| Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm   | 11             | kJ/m <sup>2</sup> | ISO 179/1eA  |
| Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm  | 9              | kJ/m <sup>2</sup> | ISO 179/1eA  |
| Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm   | NB             | kJ/m <sup>2</sup> | ISO 179/1eU  |
| Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm  | NB             | kJ/m <sup>2</sup> | ISO 179/1eU  |
| <b>THERMAL</b>                               |                |                   |              |
| 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 <sup>(1)</sup>   | 130                               | °C                      | UL 746B        |
| Relative Temp Index, Mech w/o impact <sup>(1)</sup> | 150                               | °C                      | UL 746B        |
| Metallized Haze Onset <sup>(1)</sup>                | 165                               | °C                      | SABIC method   |
| <b>PHYSICAL</b>                                     |                                   |                         |                |
| 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/cm <sup>3</sup>       | 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                                | cm <sup>3</sup> /10 min | ISO 1133       |
| <b>ELECTRICAL</b>                                   |                                   |                         |                |
| 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        |
| <b>FLAME CHARACTERISTICS <sup>(1)</sup></b>         |                                   |                         |                |
| UL Yellow Card Link                                 | <a href="#">E207780-100052928</a> | -                       | -              |
| 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 |
| <b>INJECTION MOLDING</b>                            |                                   |                         |                |
| 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                      |                |



| 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.

### ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

### MORE INFORMATION

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

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