

# LEXANT™ COPOLYMER XHT3171

REGION AMERICAS

## DESCRIPTION

XHT3171 is a 38 MVR high flow, high heat polycarbonate copolymer enabling high aesthetics, thin wall and complex designs. It is available in a range of opaque colors.

## TYPICAL PROPERTY VALUES

Revision 20231130

| PROPERTIES                                   | TYPICAL VALUES | UNITS             | TEST METHODS |
|----------------------------------------------|----------------|-------------------|--------------|
| <b>MECHANICAL <sup>(1)</sup></b>             |                |                   |              |
| Tensile Stress, yld, Type I, 50 mm/min       | 75             | MPa               | ASTM D638    |
| Tensile Stress, brk, Type I, 50 mm/min       | 60             | MPa               | ASTM D638    |
| Tensile Strain, yld, Type I, 50 mm/min       | 7              | %                 | ASTM D638    |
| Tensile Strain, brk, Type I, 50 mm/min       | >30            | %                 | ASTM D638    |
| Tensile Modulus, 50 mm/min                   | 2500           | 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     | 2700           | MPa               | ASTM D790    |
| Tensile Stress, yield, 50 mm/min             | 75             | MPa               | ISO 527      |
| Tensile Stress, break, 50 mm/min             | 60             | MPa               | ISO 527      |
| Tensile Strain, yield, 50 mm/min             | 7              | %                 | ISO 527      |
| Tensile Strain, break, 50 mm/min             | >50            | %                 | ISO 527      |
| Tensile Modulus, 1 mm/min                    | 2500           | MPa               | ISO 527      |
| Flexural Stress, yield, 2 mm/min             | 110            | MPa               | ISO 178      |
| Flexural Modulus, 2 mm/min                   | 2400           | MPa               | ISO 178      |
| Ball Indentation Hardness, H358/30           | 152            | MPa               | ISO 2039-1   |
| Hardness, Rockwell R                         | 125            | -                 | ISO 2039-2   |
| <b>IMPACT <sup>(1)</sup></b>                 |                |                   |              |
| Izod Impact, unnotched, 23°C                 | NB             | J/m               | ASTM D4812   |
| Izod Impact, unnotched, -30°C                | NB             | J/m               | ASTM D4812   |
| Izod Impact, notched, 23°C                   | 80             | J/m               | ASTM D256    |
| Izod Impact, notched, -30°C                  | 75             | J/m               | ASTM D256    |
| 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   | 10             | 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 <sup>(1)</sup></b>                |                |                   |              |
| Vicat Softening Temp, Rate B/50              | 172            | °C                | ASTM D1525   |
| Vicat Softening Temp, Rate B/120             | 173            | °C                | ASTM D1525   |
| HDT, 0.45 MPa, 3.2 mm, unannealed            | 167            | °C                | ASTM D648    |
| HDT, 1.82 MPa, 3.2mm, unannealed             | 154            | °C                | ASTM D648    |

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CHEMISTRY THAT MATTERS™

| PROPERTIES                                  | TYPICAL VALUES | UNITS       | TEST METHODS   |
|---------------------------------------------|----------------|-------------|----------------|
| CTE, -40°C to 40°C, flow                    | 6.E-05         | 1 / °C      | ASTM E83 1     |
| CTE, -40°C to 40°C, xflow                   | 6.E-05         | 1 / °C      | ASTM E83 1     |
| 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    |
| Ball Pressure Test, 125°C +/- 2°C           | PASSES         | -           | IEC 60695-10-2 |
| Vicat Softening Temp, Rate B/50             | 173            | °C          | ISO 306        |
| Vicat Softening Temp, Rate B/120            | 175            | °C          | ISO 306        |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm      | 167            | °C          | ISO 75/Bf      |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm       | 154            | °C          | ISO 75/Af      |
| Metallized Haze pass at 1.5mm               | 160            | °C          | SABIC method   |
| <b>PHYSICAL <sup>(1)</sup></b>              |                |             |                |
| Specific Gravity                            | 1.2            | -           | ASTM D792      |
| Mold Shrinkage, flow, 3.2 mm <sup>(2)</sup> | 0.7 – 1        | %           | SABIC method   |
| Melt Flow Rate, 300°C/2.16 kgf              | 14             | g/ 10 min   | ASTM D1238     |
| Melt Flow Rate, 330°C/2.16 kgf              | 42             | g/ 10 min   | ASTM D1238     |
| Water Absorption, (23°C/saturated)          | 0.35           | %           | ISO 62-1       |
| Moisture Absorption (23°C / 50% RH)         | 0.35           | %           | ISO 62         |
| Melt Volume Rate, MVR at 300°C/2.16 kg      | 12             | cm³/ 10 min | ISO 1133       |
| Melt Volume Rate, MVR at 330°C/2.16kg       | 38             | cm³/ 10 min | ISO 1133       |
| <b>INJECTION MOLDING <sup>(3)</sup></b>     |                |             |                |
| Drying Temperature                          | 130            | °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                            | 85 – 130       | °C          |                |
| 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) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article. The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(3) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

## MORE INFORMATION

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



#### 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.

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