

LEXANTM COPOLYMER XHT5141

REGION AMERICAS

DESCRIPTION

XHT5141 is a high flow, high heat polycarbonate copolymer with a haze onset of 185C. It is available in a range of opaque colors.

TYPICAL PROPERTY VALUES

Revision 20241028

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|--------|--------------|
| MECHANICAL (1) | | | |
| Tensile Stress, yld, Type I, 50 mm/min | 80 | MPa | ASTM D638 |
| Tensile Stress, brk, Type I, 50 mm/min | 65 | MPa | ASTM D638 |
| Tensile Strain, yld, Type I, 50 mm/min | 7.5 | % | ASTM D638 |
| Tensile Strain, brk, Type I, 50 mm/min | 45 | % | ASTM D638 |
| Tensile Modulus, 5 mm/min | 2600 | MPa | ASTM D638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 125 | MPa | ASTM D790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2650 | MPa | ASTM D790 |
| Tensile Stress, yield, 50 mm/min | 80 | MPa | ISO 527 |
| Tensile Stress, break, 50 mm/min | 65 | MPa | ISO 527 |
| Tensile Strain, yield, 50 mm/min | 7 | % | ISO 527 |
| Tensile Strain, break, 50 mm/min | 45 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 2500 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 120 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 2550 | MPa | ISO 178 |
| IMPACT (1) | | | |
| Izod Impact, notched, 23°C | 80 | J/m | ASTM D256 |
| Izod Impact, notched, -30°C | 35 | J/m | ASTM D256 |
| Instrumented Dart Impact Total Energy, 23°C | 65 | 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 | 11 | kJ/m² | ISO 180/1A |
| Izod Impact, notched 80*10*3 -30°C | 8 | 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 | 8 | 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 (1) | | | |
| Vicat Softening Temp, Rate B/50 | 190 | °C | ASTM D1525 |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 185 | °C | ASTM D648 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 174 | °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 | 7.E-05 | 1/°C | ISO 11359-2 |
| CTE, -40°C to 40°C, xflow | 6.5E-05 | 1/°C | ISO 11359-2 |



| Ball Pressure Test, 125°C + J- 2°C PASSES - IEC 60695-10-2 Ball Pressure Test, 165°C + J- 2°C PASSES - IEC 60695-10-2 Ball Pressure Test, 165°C + J- 2°C PASSES - IEC 60695-10-2 Ball Pressure Test, 165°C + J- 2°C PASSES - IEC 60695-10-2 Vicat Softening Temp, Rate B J 100 190 °C ISO 306 HDT J/B I, 0.45 MPa Flatw 80°10°4 sp=64mm 183 °C ISO 75 J/B HDT J/B I, 1.8 MPa Flatw 80°10°4 sp=64mm 170 °C SAIC method HDT J/B I, 1.8 MPa Flatw 80°10°4 sp=64mm 180 °C SAIC method HDT J/B I, 1.8 MPa Flatw 80°10°4 sp=64mm 170 °C SAIC method HDT J/B I, 1.8 MPa Flatw 80°10°4 sp=64mm 180 °C SAIC method HDT J/B I, 1.8 MPa Flatw 80°10°4 sp=64mm 180 °C SAIC method HDT J/B I, 1.8 MPa Flatw 80°10°4 sp=64mm 180 SAIC method SAIC method Metallized Haze Onset 1.2 SAIC method SAIC method SAIC method SAIC method SAIC method SAIC method SAIC method | PROPERTIES | TYPICAL VALUES | LINUTC | |
|--|---|----------------|------------|----------------|
| Ball Pressure Test, 165°C +/- 2°C PASSES - IEC 60695·10·2 Vicat Softening Temp, Rate B/50 190 °C ISO 306 Vicat Softening Temp, Rate B/120 190 °C ISO 306 HDT/B/I. A.5 MPa Flatw 80*10°4 sp=64mm 183 °C ISO 75/Bf Metallized Haze Onset 170 °C ABIC method PHYSICAL*** ** ASTM D792 Mold Shrinkage, flow, 3.2 mm² 1.2 ASTM D792 Mold Shrinkage, flow, 3.2 mm² 1.2 ASTM D1238 Persik Ret, 330°C/2.16 kgf 1.2 g/m² ISO 62-1 Welt Flow Rate, 330°C/2.16 kgf 1.2 g/m² ISO 62-1 Welt Volume Rate, MVR at 330°C/2.16 kgf 0.5 % ISO 62-1 Melt Volume Rate, MVR at 330°C/2.16 kg 1.5 % ISO 62-1 Drying Time 4-6 HIS * Drying Time (Cumulative) 4-6 HIS * Maximum Molsture Content 3.20-345 ° * Nozzle Temperature 3.0-345 ° * | | | UNITS | TEST METHODS |
| Vicat Softening Temp, Rate B/120 190 °C ISO 306 Vicat Softening Temp, Rate B/120 190 °C ISO 306 HDT/JRI, 0.45 MFs Flatw 80*10*4 sp=64mm 183 °C ISO 75/Bf HDT/JRI, 1.8 MPa Flatw 80*10*4 sp=64mm 180 °C ISO 75/Af Metallized Haze Onset 180 °C SABIC method Metallized Haze Onset *** SABIC method PHYSICAL *** ** ASTM D792 Moid Shrinkage, flow, 3.2 mm (²) 1.2 ° ASTM D792 Moid Shrinkage, flow, 3.2 mm (²) 1.6 9/10 min ASTM D1238 Water Absorption (23°C/s16 kgf 1.2 9/10 min ASTM D1238 Water Absorption (23°C/s16 kgf 1.2 9/10 min ISO 62-1 Moisture Absorption (23°C/s16 kgf 0.25 % 150 62-1 Moisture Absorption (23°C/s16 kgf 1.5 * 150 62-1 Inviertion MOLDING (°) ** * 150 62-1 Drying Time (cut ulative) 4 4 6 150 - 1 Moisture Absorption (23°C s | Ball Pressure Test, 125°C +/- 2°C | PASSES | - | IEC 60695-10-2 |
| Vicat Softening Temp, Rate B/120 190 °C ISO 306 HDT/Bf, 0.45 MPa Flatw 80°10°4 sp=64mm 183 °C ISO 75 JB HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm 170 °C ISO 75 JM Metallized Haze Onset 180 °C SABIC method PHYSICAL ¹ Specific Gravity 1.2 A STM D792 Mold Shrinkage, flow, 3.2 mm ⁽²⁾ 1.2 g/m³ ASHI D792 Melt Flow Rate, 330°C/2.16 kgf 1.2 g/m³ SABIC method Water Absorption, (23°C/saturated) 1.2 g/m³ ISO 62-1 Water Absorption (23°C/saturated) 0.5 % ISO 62-1 Melt Volume Rate, MVR at 330°C/2.16kg 15 m³/l Ominim ISO 1183 INJECTION MOLDING ⁽³⁾ Projing Temperature 4 - 6 HIS L Drying Time (Lumulative) 4 - 6 HIS L Melt Temperature 320 - 345 °C L Nozzie Temperature 310 - 33 °C L Front - Zone 3 Temperature | Ball Pressure Test, 165°C +/- 2°C | PASSES | - | IEC 60695-10-2 |
| HDT/βf, 0.45 MPa Flatw 80°10°4 sp=64mm 183 °C ISO 75 /Bf HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm 170 °C ISO 75 /Af Metallized Haze Onset 180 °C SABIC method PHYSICAL (°) Specific Gravity 1.2 - ASTM D792 Mold Shrinkage, flow, 3.2 mm (²) 0.6 – 0.95 % SABIC method Melt Flow Rate, 330°C/2.16 kgf 1.2 g/cm³ ISO 1183 Water Absorption, (23°C/saturated) 0.5 % ISO 62 Melt Volume Rate, MWR at 330°C/2.16kg 15 cm³/10 min ISO 1133 INJECTION MOLDING (³) TOPYING Time (Cumulative) 48 HIS Drying Time (Cumulative) 48 HIS Melt Temperature 30 – 345 °C Mozzle Temperature 315 – 340 °C Nozzle Temperature 320 – 345 °C Mold Temperature 30 – 325 °C Middle - Zone 2 Temperature 310 – 335 °C Mold Temperature 30 – 30 – 30< | Vicat Softening Temp, Rate B/50 | 190 | °C | ISO 306 |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 170 °C ISO 75/Af Metallized Haze Onset 180 °C SABIC method PHYSICAL **1 Specific Gravity 1.2 - ASTM D792 Mold Shrinkage, flow, 3.2 mm **[2] 0.6 - 0.95 % SABIC method Melt Flow Rate, 330*C/2.16 kgf 1.2 g/cm³ ISO 1183 Water Absorption, (23*C / 50% RH) 0.5 % SO6 2-1 Moisture Absorption (23*C / 50% RH) 0.25 % ISO 62-1 Melt Volume Rate, MVR at 330*C/2.16kg 15 cm³/10 min SO 133 INJECTION MOLDING**(3) Prying Temperature Drying Time (Cumulative) 4-6 Hrs Drying Time (Cumulative) 48 Hrs Maximum Moisture Content 320-345 °C Nozzle Temperature 315-340 °C Nozzle Temperature 310-335 °C Rear - Zone 1 Temperature 310-335 °C Mold Temperature 300-325 °C <th< th=""><th>Vicat Softening Temp, Rate B/120</th><th>190</th><th>°C</th><th>ISO 306</th></th<> | Vicat Softening Temp, Rate B/120 | 190 | °C | ISO 306 |
| Metallized Haze Onset 180 °C SABIC method PHYSICAL (¹) Specific Gravity 1.2 - ASTM D792 Mold Shrinkage, flow, 3.2 mm (²) 0.6 - 0.95 % SABIC method Melt Flow Rate, 330°C/2.16 kgf 16 g/10 min ASTM D1238 Water Absorption, (23°C/saturated) 0.5 % ISO 62-1 Moisture Absorption (23°C/50% RH) 0.25 m²/10 min ISO 62-1 Melt Volume Rate, MVR at 330°C/2.16kg 15 m²/10 min ISO 133 Drying Time Prograture 135 °C 1 Drying Time (Cumulative) 4-6 Hrs 1 Maximum Moisture Content 4.0 C 1 Maximum Moisture Content 320 - 345 °C 1 Nozzle Temperature 315 - 340 °C 1 Middle - Zone 3 Temperature 310 - 335 °C 1 Rear - Zone 1 Temperature 300 - 325 °C 1 Mold Temperature 300 - 325 °C 1 Mold Temperature 300 - 30 | HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 183 | °C | ISO 75/Bf |
| PHYSICAL (**) Specific Gravity 1.2 - C ASTM D792 Mold Shrinkage, flow, 3.2 mm (**) 0.6 - 0.95 \$ SABIC method Melt Flow Rate, 330°C/2.16 kgf 16 g/10 min ASTM D1238 Density 1.2 g/cm³ ISO 1183 Water Absorption, (23°C/saturated) 0.5 \$ ISO 62-1 Moisture Absorption (23°C/ 50% RH) 0.25 \$ ISO 62 Melt Volume Rate, MVR at 330°C/2.16kg 15 cm³/10 min ISO 62 Melt Tollom MOLDING (**) ** ** ** Drying Temperature 135 **C ** Drying Time (Cumulative) 4.8 Hrs ** Makimum Moisture Content 300-345 ** ** Melt Temperature 315-340 **C ** Front - Zone 3 Temperature 310-335 ** ** Moiddle- Zone 2 Temperature 300-325 ** ** Mold Temperature 300-307 MPa ** Mold Temperature 30-07 MPa ** | HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 170 | °C | ISO 75/Af |
| Specific Gravity 1.2 ASTM D792 Mold Shrinkage, flow, 3.2 mm ⁽²⁾ 0.6 - 0.95 % ASBIC method Melt Flow Rate, 330°C/2.16 kgf 16 g/10 min ASTM D1238 Density 1.2 g/cm³ ISO 1183 Water Absorption, (23°C/saturated) 0.5 % ISO 62-1 Moisture Absorption (23°C/ 50% RH) 0.25 % ISO 62-1 Melt Volume Rate, MVR at 330°C/2.16kg 15 cm³/10 min ISO 1133 INJECTION MOLDING ⁽³⁾ V V Drying Temperature 4-6 Hrs V Drying Time (Cumulative) 48 Hrs V Maximum Moisture Content 0.02 % V Melt Temperature 320 - 345 °C V Nozzle Temperature 315 - 340 °C V Moidle- Zone 2 Temperature 310 - 335 °C V Mold Temperature 300 - 325 °C V Mold Temperature 300 - 30 - 7 MPa V Mold Temperature | Metallized Haze Onset | 180 | °C | SABIC method |
| Mold Shrinkage, flow, 3.2 mm (²) 0.6 - 0.95 % SABIC method Melt Flow Rate, 330°C/2.16 kgf 16 g/10 min ASTM D1238 Density 1.2 g/cm³ ISO 1183 Water Absorption, (23°C/saturated) 0.5 % ISO 62-1 Melt Volume Rate, MVR at 330°C/2.16kg 15 cm³/10 min ISO 133 INJECTION MOLDING (³) Drying Temperature 135 °C Drying Time (Cumulative) 48 Hrs Maximum Moisture Content 320 - 345 °C Melt Temperature 320 - 345 °C Front - Zone 3 Temperature 310 - 335 °C Middle - Zone 2 Temperature 300 - 325 °C Mold Temperature 300 - 325 °C Back Pressure 0.3 - 0.7 MPa Screw Speed 40 - 70 mPa | PHYSICAL (1) | | | |
| Melt Flow Rate, 330°C/2.16 kgf 16 g/10 min ASTM D1238 Density 1.2 g/cm³ ISO 1183 Water Absorption, (23°C/saturated) 0.5 % ISO 62-1 Moisture Absorption (23°C/50% RH) 0.25 % ISO 62 Melt Volume Rate, MVR at 330°C/2.16 kg 15 cm³/10 min ISO 1133 INJECTION MOLDING (³) Drying Temperature 4-6 Hrs | Specific Gravity | 1.2 | - | ASTM D792 |
| Density 1.2 g/cm³ ISO 1183 Water Absorption, (23°C/saturated) 0.5 % ISO 62-1 Moisture Absorption (23°C/50°RH) 0.25 % ISO 62 Melt Volume Rate, MVR at 330°C/2.16kg 15 cm³/10 min ISO 1133 INJECTION MOLDING (3) ** ** ** Drying Temperature 135 °C ** ** Drying Time (Cumulative) 4-6 Hrs ** | Mold Shrinkage, flow, 3.2 mm ⁽²⁾ | 0.6 – 0.95 | % | SABIC method |
| Water Absorption (23°C / 50% RH) 50 \$ 150 62-1 Moisture Absorption (23°C / 50% RH) 0.25 % 150 62-1 Melt Volume Rate, MVR at 330°C / 2.16kg 15 cm³/10 min 150 1133 INJECTION MOLDING ⁽³⁾ Drying Temperature 135 °C ** Drying Time (Cumulative) 4-6 Hrs ** ** Maximum Moisture Content 0.02 % ** ** Melt Temperature 320 - 345 °C ** ** Nozzle Temperature 315 - 340 °C ** ** Front - Zone 3 Temperature 320 - 345 °C ** ** Middle - Zone 2 Temperature 310 - 335 °C ** ** Mold Temperature 110 - 140 °C ** ** Mold Temperature 110 - 140 °C ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** | Melt Flow Rate, 330°C/2.16 kgf | 16 | g/10 min | ASTM D1238 |
| Moisture Absorption (23°C / 50% RH) 0.25 % ISO 62 Melt Volume Rate, MVR at 330°C/2.16kg 15 cm³/10 min ISO 1133 INJECTION MOLDING (3) Drying Temperature 135 °C Drying Time (Cumulative) 4 - 6 Hrs Maximum Moisture Content 0.02 % Melt Temperature 320 - 345 °C Nozzle Temperature 315 - 340 °C Front - Zone 3 Temperature 320 - 345 °C Middle - Zone 2 Temperature 310 - 335 °C Rear - Zone 1 Temperature 300 - 325 °C Mod 1 Temperature 110 - 140 °C Back Pressure 0.3 - 0.7 MPa Screw Speed 40 - 70 rpm | Density | 1.2 | g/cm³ | ISO 1183 |
| Melt Volume Rate, MVR at 330°C/2.16kg 15 cm³/10 min ISO 1133 INJECTION MOLDING (3) Drying Temperature 135 °C Drying Time 4 – 6 Hrs Maximum Moisture Content 0.02 % Melt Temperature 320 – 345 °C Nozzle Temperature 315 – 340 °C Front - Zone 3 Temperature 320 – 345 °C Middle - Zone 2 Temperature 310 – 335 °C Rear - Zone 1 Temperature 300 – 325 °C Mold Temperature 110 – 140 °C Back Pressure 0.3 – 0.7 MPa Screw Speed 40 – 70 rpm | Water Absorption, (23°C/saturated) | 0.5 | % | ISO 62-1 |
| INJECTION MOLDING (3) Drying Temperature 135 °C Drying Time 4 - 6 Hrs Drying Time (Cumulative) 48 Hrs Maximum Moisture Content 0.02 % Melt Temperature 320 - 345 °C Nozzle Temperature 315 - 340 °C Front - Zone 3 Temperature 320 - 345 °C Middle - Zone 2 Temperature 310 - 335 °C Rear - Zone 1 Temperature 300 - 325 °C Mold Temperature 110 - 140 °C Back Pressure 0.3 - 0.7 MPa Screw Speed 40 - 70 rpm | Moisture Absorption (23°C / 50% RH) | 0.25 | % | ISO 62 |
| Drying Temperature 135 °C Drying Time 4 - 6 Hrs Drying Time (Cumulative) 48 Hrs Maximum Moisture Content 0.02 % Melt Temperature 320 - 345 °C Nozzle Temperature 315 - 340 °C Front - Zone 3 Temperature 320 - 345 °C Middle - Zone 2 Temperature 310 - 335 °C Rear - Zone 1 Temperature 300 - 325 °C Mold Temperature 110 - 140 °C Back Pressure 0.3 - 0.7 MPa Screw Speed 40 - 70 rpm | Melt Volume Rate, MVR at 330°C/2.16kg | 15 | cm³/10 min | ISO 1133 |
| Drying Time 4-6 Hrs Drying Time (Cumulative) 48 Hrs Maximum Moisture Content 0.02 % Melt Temperature 320-345 °C Nozzle Temperature 315-340 °C Front · Zone 3 Temperature 320-345 °C Middle · Zone 2 Temperature 310-335 °C Rear · Zone 1 Temperature 300-325 °C Mold Temperature 110-140 °C Back Pressure 0.3-0.7 MPa Screw Speed 40-70 rpm | INJECTION MOLDING (3) | | | |
| Drying Time (Cumulative) 48 Hrs Maximum Moisture Content 0.02 % Melt Temperature 320 – 345 °C Nozzle Temperature 315 – 340 °C Front - Zone 3 Temperature 320 – 345 °C Middle - Zone 2 Temperature 310 – 335 °C Rear - Zone 1 Temperature 300 – 325 °C Mold Temperature 110 – 140 °C Back Pressure 0.3 – 0.7 MPa Screw Speed 40 – 70 rpm | Drying Temperature | 135 | °C | |
| Maximum Moisture Content 0.02 % Melt Temperature 320-345 °C Nozzle Temperature 315-340 °C Front - Zone 3 Temperature 320-345 °C Middle - Zone 2 Temperature 310-335 °C Rear - Zone 1 Temperature 300-325 °C Mold Temperature 110-140 °C Back Pressure 0.3-0.7 MPa Screw Speed 40-70 rpm | Drying Time | 4 – 6 | Hrs | |
| Melt Temperature 320-345 °C Nozzle Temperature 315-340 °C Front - Zone 3 Temperature 320-345 °C Middle - Zone 2 Temperature 310-335 °C Rear - Zone 1 Temperature 300-325 °C Mold Temperature 110-140 °C Back Pressure 0.3-0.7 MPa Screw Speed 40-70 rpm | Drying Time (Cumulative) | 48 | Hrs | |
| Nozzle Temperature 315 – 340 °C Front - Zone 3 Temperature 320 – 345 °C Middle - Zone 2 Temperature 310 – 335 °C Rear - Zone 1 Temperature 300 – 325 °C Mold Temperature 110 – 140 °C Back Pressure 0.3 – 0.7 MPa Screw Speed 40 – 70 rpm | Maximum Moisture Content | 0.02 | % | |
| Front - Zone 3 Temperature 320 – 345 °C Middle - Zone 2 Temperature 310 – 335 °C Rear - Zone 1 Temperature 300 – 325 °C Mold Temperature 110 – 140 °C Back Pressure 0.3 – 0.7 MPa Screw Speed 40 – 70 rpm | Melt Temperature | 320 – 345 | °C | |
| Middle - Zone 2 Temperature 310 – 335 °C Rear - Zone 1 Temperature 300 – 325 °C Mold Temperature 110 – 140 °C Back Pressure 0.3 – 0.7 MPa Screw Speed 40 – 70 rpm | Nozzle Temperature | 315 – 340 | °C | |
| Rear - Zone 1 Temperature 300 – 325 °C Mold Temperature 110 – 140 °C Back Pressure 0.3 – 0.7 MPa Screw Speed 40 – 70 rpm | Front - Zone 3 Temperature | 320 – 345 | °C | |
| Mold Temperature 110 – 140 °C Back Pressure 0.3 – 0.7 MPa Screw Speed 40 – 70 rpm | Middle - Zone 2 Temperature | 310 – 335 | °C | |
| Back Pressure 0.3 – 0.7 MPa Screw Speed 40 – 70 rpm | Rear - Zone 1 Temperature | 300 – 325 | °C | |
| Screw Speed 40 – 70 rpm | Mold Temperature | 110 – 140 | °C | |
| · | Back Pressure | 0.3 – 0.7 | MPa | |
| Shot to Cylinder Size 40 – 60 % | Screw Speed | 40 – 70 | rpm | |
| | Shot to Cylinder Size | 40 – 60 | % | |
| Vent Depth 0.025 – 0.08 mm | 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.

MORE INFORMATION

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

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⁽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.