

# XENOVY™ RESIN 6620U

REGION AMERICAS

## DESCRIPTION

PBT+PC, Unfilled, Impact Modified, UV stabilized. Outstanding low temperature impact performance and chemical resistance.

## TYPICAL PROPERTY VALUES

Revision 20190925

| PROPERTIES                                   | TYPICAL VALUES | UNITS | TEST METHODS |
|----------------------------------------------|----------------|-------|--------------|
| MECHANICAL                                   |                |       |              |
| Tensile Stress, yld, Type I, 50 mm/min       | 43             | MPa   | ASTM D 638   |
| Tensile Stress, brk, Type I, 50 mm/min       | 32             | MPa   | ASTM D 638   |
| Tensile Strain, yld, Type I, 50 mm/min       | 4.2            | %     | ASTM D 638   |
| Tensile Strain, brk, Type I, 50 mm/min       | 145            | %     | ASTM D 638   |
| Tensile Modulus, 50 mm/min                   | 1780           | MPa   | ASTM D 638   |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 63             | MPa   | ASTM D 790   |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 1780           | MPa   | ASTM D 790   |
| Tensile Stress, yield, 50 mm/min             | 41             | MPa   | ISO 527      |
| Tensile Stress, break, 50 mm/min             | 31             | MPa   | ISO 527      |
| Tensile Strain, yield, 50 mm/min             | 3.9            | %     | ISO 527      |
| Tensile Strain, break, 50 mm/min             | 19.4           | %     | ISO 527      |
| Tensile Modulus, 1 mm/min                    | 1830           | MPa   | ISO 527      |
| Flexural Stress, yield, 2 mm/min             | 60             | MPa   | ISO 178      |
| Flexural Modulus, 2 mm/min                   | 1690           | MPa   | ISO 178      |
| IMPACT                                       |                |       |              |
| Izod Impact, unnotched, 23°C                 | 1602           | J/m   | ASTM D 4812  |
| Izod Impact, notched, 23°C                   | 897            | J/m   | ASTM D 256   |
| Izod Impact, notched, -30°C                  | 667            | J/m   | ASTM D 256   |
| Instrumented Impact Total Energy, 23°C       | 56             | J     | ASTM D 3763  |
| Izod Impact, notched 80*10*4 +23°C           | 54             | kJ/m² | ISO 180/1A   |
| Izod Impact, notched 80*10*4 -30°C           | 51             | kJ/m² | ISO 180/1A   |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm   | 72             | kJ/m² | ISO 179/1eA  |
| THERMAL                                      |                |       |              |
| Vicat Softening Temp, Rate B/50              | 123            | °C    | ASTM D 1525  |
| HDT, 0.45 MPa, 6.4 mm, unannealed            | 98             | °C    | ASTM D 648   |
| HDT, 1.82 MPa, 6.4 mm, unannealed            | 60             | °C    | ASTM D 648   |
| CTE, -40°C to 40°C, flow                     | 9.89E-05       | 1/°C  | ASTM E 831   |
| CTE, -40°C to 40°C, xflow                    | 1.05E-04       | 1/°C  | ASTM E 831   |
| CTE, -40°C to 40°C, flow                     | 9.89E-05       | 1/°C  | ISO 11359-2  |
| CTE, -40°C to 40°C, xflow                    | 1.05E-04       | 1/°C  | ISO 11359-2  |
| Vicat Softening Temp, Rate B/50              | 118            | °C    | ISO 306      |
| Vicat Softening Temp, Rate B/120             | 121            | °C    | ISO 306      |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm        | 50             | °C    | ISO 75/Af    |
| Relative Temp Index, Elec                    | 75             | °C    | UL 746B      |
| Relative Temp Index, Mech w/impact           | 75             | °C    | UL 746B      |

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CHEMISTRY THAT MATTERS™



| PROPERTIES                             | TYPICAL VALUES                 | UNITS                   | TEST METHODS |
|----------------------------------------|--------------------------------|-------------------------|--------------|
| Relative Temp Index, Mech w/o impact   | 75                             | °C                      | UL 746B      |
| PHYSICAL                               |                                |                         |              |
| Specific Gravity                       | 1.2                            | -                       | ASTM D 792   |
| Specific Volume                        | 0.83                           | cm <sup>3</sup> /g      | ASTM D 792   |
| Mold Shrinkage, flow, 3.2 mm           | 1.6 – 1.8                      | %                       | SABIC method |
| Mold Shrinkage, xflow, 3.2 mm          | 1.6 – 1.8                      | %                       | SABIC method |
| Melt Flow Rate, 266°C/5.0 kgf          | 21.9                           | g/10 min                | ASTM D 1238  |
| Density                                | 1.21                           | g/cm <sup>3</sup>       | ISO 1183     |
| Water Absorption, (23°C/sat)           | 0.14                           | %                       | ISO 62       |
| Melt Volume Rate, MVR at 265°C/5.0 kg  | 17                             | cm <sup>3</sup> /10 min | ISO 1133     |
| ELECTRICAL                             |                                |                         |              |
| Arc Resistance, Tungsten {PLC}         | 5                              | PLC Code                | ASTM D 495   |
| Hot Wire Ignition {PLC}                | 3                              | PLC Code                | UL 746A      |
| High Voltage Arc Track Rate {PLC}      | 1                              | PLC Code                | UL 746A      |
| High Ampere Arc Ign, surface {PLC}     | 0                              | PLC Code                | UL 746A      |
| Comparative Tracking Index (UL) {PLC}  | 0                              | PLC Code                | UL 746A      |
| FLAME CHARACTERISTICS                  |                                |                         |              |
| UL Yellow Card Link                    | <a href="#">E121562-221088</a> | -                       | -            |
| UL Recognized, 94HB Flame Class Rating | 1.47                           | mm                      | UL 94        |
| INJECTION MOLDING                      |                                |                         |              |
| Drying Temperature                     | 105 – 115                      | °C                      |              |
| Drying Time                            | 2 – 4                          | hrs                     |              |
| Drying Time (Cumulative)               | 6                              | hrs                     |              |
| Maximum Moisture Content               | 0.02                           | %                       |              |
| Melt Temperature                       | 250 – 270                      | °C                      |              |
| Nozzle Temperature                     | 250 – 270                      | °C                      |              |
| Front - Zone 3 Temperature             | 250 – 265                      | °C                      |              |
| Middle - Zone 2 Temperature            | 240 – 255                      | °C                      |              |
| Rear - Zone 1 Temperature              | 230 – 245                      | °C                      |              |
| Mold Temperature                       | 40 – 80                        | °C                      |              |
| Back Pressure                          | 0.2 – 0.3                      | MPa                     |              |
| Shot to Cylinder Size                  | 50 – 80                        | %                       |              |
| Vent Depth                             | 0.013 – 0.02                   | mm                      |              |

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