

# XENOY™ RESIN HX6600HP

REGION ASIA

## DESCRIPTION

Xenoy HX6600HP is PBT based semi-crystalline blend with balanced flow and impact properties. Improved chemical resistance against lab disinfectants and chemicals for healthcare enclosure and housing applications. Healthcare management of change, biocompatible (ISO10993 or USP Class VI). EtO, Gamma and Steam sterilizable.

## TYPICAL PROPERTY VALUES

Revision 20220721

| PROPERTIES                                   | TYPICAL VALUES | UNITS             | TEST METHODS |
|--|----------------|-------------------|--------------|
| <b>MECHANICAL</b>                            |                |                   |              |
| Tensile Stress, yld, Type I, 50 mm/min       | 43             | MPa               | ASTM D638    |
| Tensile Stress, brk, Type I, 50 mm/min       | 35             | MPa               | ASTM D638    |
| Tensile Strain, yld, Type I, 50 mm/min       | 4              | %                 | ASTM D638    |
| Tensile Strain, brk, Type I, 50 mm/min       | 150            | %                 | ASTM D638    |
| Tensile Modulus, 5 mm/min                    | 1900           | MPa               | ASTM D638    |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 43             | MPa               | ASTM D790    |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 1900           | MPa               | ASTM D790    |
| Tensile Stress, yield, 50 mm/min             | 44             | MPa               | ISO 527      |
| Tensile Stress, break, 50 mm/min             | 37             | MPa               | ISO 527      |
| Tensile Strain, yield, 50 mm/min             | 4              | %                 | ISO 527      |
| Tensile Strain, break, 50 mm/min             | 100            | %                 | ISO 527      |
| Tensile Modulus, 1 mm/min                    | 1900           | MPa               | ISO 527      |
| Flexural Stress, yield, 2 mm/min             | 64             | MPa               | ISO 178      |
| Flexural Modulus, 2 mm/min                   | 1800           | MPa               | ISO 178      |
| <b>IMPACT</b>                                |                |                   |              |
| Izod Impact, notched, 23°C                   | 800            | J/m               | ASTM D256    |
| Izod Impact, notched, -30°C                  | 750            | J/m               | ASTM D256    |
| Multiaxial Impact                            | 100            | J                 | ISO 6603     |
| Instrumented Dart Impact Total Energy, 23°C  | 100            | J                 | ASTM D3763   |
| Izod Impact, unnotched 80*10*4 -40°C         | NB             | kJ/m <sup>2</sup> | ISO 180/1U   |
| Izod Impact, notched 80*10*4 +23°C           | 65             | kJ/m <sup>2</sup> | ISO 180/1A   |
| Izod Impact, notched 80*10*4 -30°C           | 20             | kJ/m <sup>2</sup> | ISO 180/1A   |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm   | 70             | kJ/m <sup>2</sup> | ISO 179/1eA  |
| Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm  | NB             | kJ/m <sup>2</sup> | ISO 179/1eU  |
| <b>THERMAL</b>                               |                |                   |              |
| Vicat Softening Temp, Rate B/50              | 117            | °C                | ASTM D1525   |
| HDT, 1.82 MPa, 3.2mm, unannealed             | 60             | °C                | ASTM D648    |
| CTE, -40°C to 40°C, flow                     | 1.E-04         | 1/°C              | ASTM E831    |
| CTE, -40°C to 40°C, xflow                    | 1.E-04         | 1/°C              | ASTM E831    |
| CTE, -40°C to 40°C, flow                     | 1.E-04         | 1/°C              | ISO 11359-2  |
| CTE, -40°C to 40°C, xflow                    | 1.E-04         | 1/°C              | ISO 11359-2  |
| CTE, 23°C to 60°C, flow                      | 1.3E-04        | 1/°C              | ISO 11359-2  |
| Vicat Softening Temp, Rate B/50              | 117            | °C                | ISO 306      |
| Vicat Softening Temp, Rate B/120             | 120            | °C                | ISO 306      |

| PROPERTIES                             | TYPICAL VALUES | UNITS                   | TEST METHODS |
|--|----------------|-------------------------|--------------|
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 95             | °C                      | ISO 75/Bf    |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm  | 60             | °C                      | ISO 75/Af    |
| <b>PHYSICAL</b>                        |                |                         |              |
| Specific Gravity                       | 1.21           | -                       | ASTM D792    |
| Mold Shrinkage, flow, 3.2 mm           | 1.2 – 1.6      | %                       | SABIC method |
| Melt Flow Rate, 250°C/5.0 kgf          | 11             | g/10 min                | ASTM D1238   |
| Density                                | 1.21           | g/cm <sup>3</sup>       | ISO 1183     |
| Water Absorption, (23°C/saturated)     | 0.4            | %                       | ISO 62-1     |
| Moisture Absorption (23°C / 50% RH)    | 0.05           | %                       | ISO 62       |
| Melt Volume Rate, MVR at 250°C/5.0 kg  | 10             | cm <sup>3</sup> /10 min | ISO 1133     |
| Melt Viscosity, 260°C, 1500 sec-1      | 210            | Pa-s                    | ISO 11443    |
| <b>INJECTION MOLDING</b>               |                |                         |              |
| Drying Temperature                     | 90 – 100       | °C                      |              |
| Drying Time                            | 2 – 4          | Hrs                     |              |
| Maximum Moisture Content               | 0.02           | %                       |              |
| Melt Temperature                       | 255 – 270      | °C                      |              |
| Nozzle Temperature                     | 250 – 265      | °C                      |              |
| Front - Zone 3 Temperature             | 250 – 270      | °C                      |              |
| Middle - Zone 2 Temperature            | 240 – 265      | °C                      |              |
| Rear - Zone 1 Temperature              | 230 – 250      | °C                      |              |
| Hopper Temperature                     | 40 – 60        | °C                      |              |
| Mold Temperature                       | 60 – 80        | °C                      |              |

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