



## Xenoy\* Resin HX5600HP

### Americas: COMMERCIAL

Xenoy HX5600HP 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 PROPERTIES <sup>1</sup>              | TYPICAL VALUE | UNIT              | STANDARD    |
|----------------------------------------------|---------------|-------------------|-------------|
| <b>MECHANICAL</b>                            |               |                   |             |
| Tensile Stress, yld, Type I, 50 mm/min       | 50            | MPa               | ASTM D 638  |
| Tensile Stress, brk, Type I, 50 mm/min       | 52            | MPa               | ASTM D 638  |
| Tensile Strain, yld, Type I, 50 mm/min       | 5             | %                 | ASTM D 638  |
| Tensile Strain, brk, Type I, 50 mm/min       | 150           | %                 | ASTM D 638  |
| Tensile Modulus, 5 mm/min                    | 2100          | MPa               | ASTM D 638  |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 70            | MPa               | ASTM D 790  |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 2000          | MPa               | ASTM D 790  |
| Tensile Stress, yield, 50 mm/min             | 50            | MPa               | ISO 527     |
| Tensile Stress, break, 50 mm/min             | 55            | MPa               | ISO 527     |
| Tensile Strain, yield, 50 mm/min             | 5             | %                 | ISO 527     |
| Tensile Strain, break, 50 mm/min             | 100           | %                 | ISO 527     |
| Tensile Modulus, 1 mm/min                    | 2050          | MPa               | ISO 527     |
| Flexural Stress, yield, 2 mm/min             | 75            | MPa               | ISO 178     |
| Flexural Modulus, 2 mm/min                   | 2050          | MPa               | ISO 178     |
| <b>IMPACT</b>                                |               |                   |             |
| Izod Impact, notched, 23°C                   | 750           | J/m               | ASTM D 256  |
| Izod Impact, notched, -30°C                  | 600           | J/m               | ASTM D 256  |
| Instrumented Impact Total Energy, 23°C       | 80            | J                 | ASTM D 3763 |
| 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           | 55            | kJ/m <sup>2</sup> | ISO 180/1A  |
| Izod Impact, notched 80*10*4 -30°C           | 25            | kJ/m <sup>2</sup> | ISO 180/1A  |
| Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm  | NB            | kJ/m <sup>2</sup> | ISO 179/1eU |

1) Typical values only. Variations within normal tolerances are possible for various colours. All values are measured at least after 48 hours storage at 23°C/50% relative humidity.  
All properties, except the melt volume rate are measured on injection moulded samples.  
All samples are prepared according to ISO 294.

2) Only typical data for material selection purpose. Not to be used for part or tool design.  
3) This rating is not intended to reflect hazards presented this or any other material under actual fire conditions.  
4) Own measurement according to UL.





**Xenoy\* Resin HX5600HP**  
**Americas: COMMERCIAL**

| TYPICAL PROPERTIES <sup>1</sup>            | TYPICAL VALUE | UNIT                    | STANDARD     |
|--------------------------------------------|---------------|-------------------------|--------------|
| <b>IMPACT</b>                              |               |                         |              |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm | 60            | kJ/m <sup>2</sup>       | ISO 179/1eA  |
| <b>THERMAL</b>                             |               |                         |              |
| Vicat Softening Temp, Rate B/50            | 125           | °C                      | ASTM D 1525  |
| HDT, 1.82 MPa, 3.2mm, unannealed           | 80            | °C                      | ASTM D 648   |
| CTE, -40°C to 40°C, flow                   | 9.E-05        | 1/°C                    | ASTM E 831   |
| CTE, -40°C to 40°C, xflow                  | 9.E-05        | 1/°C                    | ASTM E 831   |
| CTE, -40°C to 40°C, flow                   | 9.E-05        | 1/°C                    | ISO 11359-2  |
| CTE, -40°C to 40°C, xflow                  | 9.E-05        | 1/°C                    | ISO 11359-2  |
| CTE, 23°C to 60°C, flow                    | 1.E-04        | 1/°C                    | ISO 11359-2  |
| Vicat Softening Temp, Rate B/50            | 125           | °C                      | ISO 306      |
| Vicat Softening Temp, Rate B/120           | 123           | °C                      | ISO 306      |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm     | 105           | °C                      | ISO 75/Bf    |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm      | 80            | °C                      | ISO 75/Af    |
| <b>PHYSICAL</b>                            |               |                         |              |
| Specific Gravity                           | 1.22          | -                       | ASTM D 792   |
| Mold Shrinkage, flow, 3.2 mm               | 0.7 - 1.1     | %                       | SABIC Method |
| Melt Flow Rate, 250°C/5.0 kgf              | 11            | g/10 min                | ASTM D 1238  |
| Density                                    | 1.22          | g/cm <sup>3</sup>       | ISO 1183     |
| Water Absorption, (23°C/sat)               | 0.4           | %                       | ISO 62       |
| 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          | 260           | Pa-s                    | ISO 11443    |

1) Typical values only. Variations within normal tolerances are possible for variose colours. All values are measured at least after 48 hours storage at 230C/50% relative humidity.  
All properties, except the melt volume rate are measured on injection moulded samples.  
All samples are prepared according to ISO 294.

2) Only typical data for material selection purpose. Not to be used for part or tool design.  
3) This rating is not intended to reflect hazards presented this or any other material under actual fire conditions.  
4) Own measurement according to UL.





**Xenoy\* Resin HX5600HP**  
**Americas: COMMERCIAL**

| PROCESSING PARAMETERS       | TYPICAL VALUE | UNIT |
|-----------------------------|---------------|------|
| <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   |

1) Typical values only. Variations within normal tolerances are possible for various colours. All values are measured at least after 48 hours storage at 23°C/50% relative humidity.  
All properties, except the melt volume rate are measured on injection moulded samples.  
All samples are prepared according to ISO 294.

2) Only typical data for material selection purpose. Not to be used for part or tool design.  
3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.  
4) Own measurement according to UL.

