

## Xylex\* Resin HX7409HP

### Asia Pacific: COMMERCIAL

Low flow, polycarbonate/Polyester alloy; contains mold release. For medical devices and pharmaceutical applications. Healthcare management of change, biocompatible (ISO 10993 or USP Class VI), food contact compliant. EtO and gamma sterilizable.

| TYPICAL PROPERTIES <sup>1</sup>              | TYPICAL VALUE | UNIT                | STANDARD    |
|----------------------------------------------|---------------|---------------------|-------------|
| <b>MECHANICAL</b>                            |               |                     |             |
| Tensile Stress, yld, Type I, 50 mm/min       | 630           | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Stress, brk, Type I, 50 mm/min       | 660           | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Strain, yld, Type I, 50 mm/min       | 6             | %                   | ASTM D 638  |
| Tensile Strain, brk, Type I, 50 mm/min       | 110           | %                   | ASTM D 638  |
| Tensile Modulus, 50 mm/min                   | 23400         | kgf/cm <sup>2</sup> | ASTM D 638  |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 960           | kgf/cm <sup>2</sup> | ASTM D 790  |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 23200         | kgf/cm <sup>2</sup> | ASTM D 790  |
| Tensile Stress, yield, 50 mm/min             | 60            | MPa                 | ISO 527     |
| Tensile Stress, break, 50 mm/min             | 65            | MPa                 | ISO 527     |
| Tensile Strain, yield, 50 mm/min             | 6             | %                   | ISO 527     |
| Tensile Strain, break, 50 mm/min             | 135           | %                   | ISO 527     |
| Tensile Modulus, 1 mm/min                    | 2400          | MPa                 | ISO 527     |
| Flexural Stress, yield, 2 mm/min             | 93            | MPa                 | ISO 178     |
| Flexural Modulus, 2 mm/min                   | 2180          | MPa                 | ISO 178     |
| <b>IMPACT</b>                                |               |                     |             |
| Izod Impact, notched, 23°C                   | 101           | cm-kgf/cm           | ASTM D 256  |
| Izod Impact, notched, -30°C                  | 8             | cm-kgf/cm           | ASTM D 256  |
| Instrumented Impact Total Energy, 23°C       | 866           | cm-kgf              | ASTM D 3763 |
| Izod Impact, notched 80*10*4 +23°C           | 15            | kJ/m <sup>2</sup>   | ISO 180/1A  |
| Izod Impact, notched 80*10*4 -30°C           | 6             | kJ/m <sup>2</sup>   | ISO 180/1A  |
| Izod Impact, notched 63.5*12.7*3.2, 23°C     | 78            | kJ/m <sup>2</sup>   | ISO 180/4A  |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm   | 22            | kJ/m <sup>2</sup>   | ISO 179/1eA |



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|-----------------------------------------|---------------|-------------------------|--------------|
| <b>THERMAL</b>                          |               |                         |              |
| Vicat Softening Temp, Rate B/50         | 130           | °C                      | ASTM D 1525  |
| HDT, 0.45 MPa, 3.2 mm, unannealed       | 122           | °C                      | ASTM D 648   |
| HDT, 1.82 MPa, 3.2mm, unannealed        | 111           | °C                      | ASTM D 648   |
| CTE, -40°C to 95°C, flow                | 7.E-05        | 1/°C                    | ASTM E 831   |
| CTE, -40°C to 95°C, xflow               | 7.E-05        | 1/°C                    | ASTM E 831   |
| CTE, -40°C to 40°C, flow                | 7.E-05        | 1/°C                    | ISO 11359-2  |
| CTE, -40°C to 40°C, xflow               | 7.E-05        | 1/°C                    | ISO 11359-2  |
| Vicat Softening Temp, Rate B/50         | 127           | °C                      | ISO 306      |
| Vicat Softening Temp, Rate B/120        | 129           | °C                      | ISO 306      |
| HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm | 122           | °C                      | ISO 75/Be    |
| HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm | 111           | °C                      | ISO 75/Ae    |
| <b>PHYSICAL</b>                         |               |                         |              |
| Specific Gravity                        | 1.2           | -                       | ASTM D 792   |
| Mold Shrinkage, flow, 3.2 mm            | 0.6 - 0.8     | %                       | SABIC Method |
| Mold Shrinkage, xflow, 3.2 mm           | 0.6 - 0.8     | %                       | SABIC Method |
| Melt Flow Rate, 265°C/2.16kg            | 3             | g/10 min                | ASTM D 1238  |
| Density                                 | 1.2           | g/cm <sup>3</sup>       | ISO 1183     |
| Water Absorption, (23°C/sat)            | 0.28          | %                       | ISO 62       |
| Moisture Absorption (23°C / 50% RH)     | 0.07          | %                       | ISO 62       |
| Melt Volume Rate, MVR at 265°C/2.16 kg  | 3             | cm <sup>3</sup> /10 min | ISO 1133     |
| <b>OPTICAL</b>                          |               |                         |              |
| Light Transmission                      | 79            | %                       | ASTM D 1003  |



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| PROCESSING PARAMETERS       | TYPICAL VALUE | UNIT |
|-----------------------------|---------------|------|
| <b>Injection Molding</b>    |               |      |
| Drying Temperature          | 70 - 90       | °C   |
| Drying Time                 | 3 - 5         | hrs  |
| Drying Time (Cumulative)    | 8             | hrs  |
| Maximum Moisture Content    | 0.02          | %    |
| Melt Temperature            | 270 - 300     | °C   |
| Nozzle Temperature          | 265 - 295     | °C   |
| Front - Zone 3 Temperature  | 270 - 300     | °C   |
| Middle - Zone 2 Temperature | 260 - 290     | °C   |
| Rear - Zone 1 Temperature   | 250 - 270     | °C   |
| Mold Temperature            | 45 - 80       | °C   |
| Back Pressure               | 0.2 - 0.5     | MPa  |
| Screw Speed                 | 20 - 100      | rpm  |
| Shot to Cylinder Size       | 40 - 80       | %    |
| Vent Depth                  | 0.013 - 0.02  | mm   |



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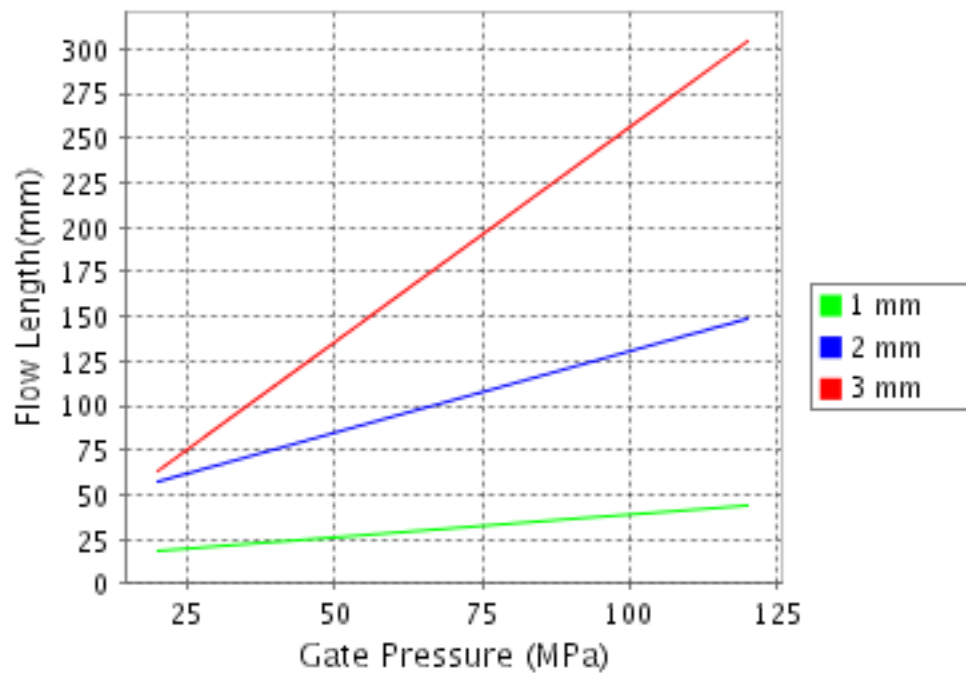
**CALCULATED FLOW LENGTH INDICATION**

**Moldflow® Radial Flow Analysis**

**Xylex\* HX7409HP**

**Melt Temperature : 285°C**

**Mold Temperature : 65°C**



**Note: Technical support is recommended if Gate Pressure is greater than 80 MPa. Contact your local representative.**

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