



## Xylex\* Resin X8210

### Asia Pacific: COMMERCIAL

PC+POLYESTER alloy. Unreinforced, transparent, impact modified for low temperature ductility

| TYPICAL PROPERTIES <sup>1</sup>              | TYPICAL VALUE | UNIT                | STANDARD    |
|----------------------------------------------|---------------|---------------------|-------------|
| <b>MECHANICAL</b>                            |               |                     |             |
| Tensile Stress, yld, Type I, 50 mm/min       | 430           | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Stress, brk, Type I, 50 mm/min       | 460           | kgf/cm <sup>2</sup> | 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, 50 mm/min                   | 15000         | kgf/cm <sup>2</sup> | ASTM D 638  |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 660           | kgf/cm <sup>2</sup> | ASTM D 790  |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 16300         | kgf/cm <sup>2</sup> | ASTM D 790  |
| Tensile Stress, yield, 50 mm/min             | 45            | MPa                 | ISO 527     |
| Tensile Stress, break, 50 mm/min             | 45            | MPa                 | ISO 527     |
| Tensile Strain, yield, 50 mm/min             | 4.6           | %                   | ISO 527     |
| Tensile Strain, break, 50 mm/min             | >150          | %                   | ISO 527     |
| Tensile Modulus, 1 mm/min                    | 1500          | MPa                 | ISO 527     |
| Flexural Stress, break, 2 mm/min             | 58            | MPa                 | ISO 178     |
| Flexural Modulus, 2 mm/min                   | 1600          | MPa                 | ISO 178     |
| <b>IMPACT</b>                                |               |                     |             |
| Izod Impact, notched, 23°C                   | 81            | cm-kgf/cm           | ASTM D 256  |
| Izod Impact, notched, -20°C                  | 65            | cm-kgf/cm           | ASTM D 256  |
| Izod Impact, notched, -30°C                  | 20            | cm-kgf/cm           | ASTM D 256  |
| Instrumented Impact Total Energy, 23°C       | 825           | cm-kgf              | ASTM D 3763 |
| Izod Impact, notched 80*10*4 +23°C           | 45            | kJ/m <sup>2</sup>   | ISO 180/1A  |
| Izod Impact, notched 80*10*4 -10°C           | 30            | kJ/m <sup>2</sup>   | ISO 180/1A  |
| Izod Impact, notched 80*10*4 -30°C           | 11            | kJ/m <sup>2</sup>   | ISO 180/1A  |

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.

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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.





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| <b>IMPACT</b>                              |               |                         |              |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm | 71            | kJ/m <sup>2</sup>       | ISO 179/1eA  |
| <b>THERMAL</b>                             |               |                         |              |
| Vicat Softening Temp, Rate B/50            | 97            | °C                      | ASTM D 1525  |
| HDT, 0.45 MPa, 3.2 mm, unannealed          | 79            | °C                      | ASTM D 648   |
| HDT, 1.82 MPa, 3.2mm, unannealed           | 75            | °C                      | ASTM D 648   |
| CTE, -40°C to 40°C, flow                   | 1.1E-04       | 1/°C                    | ASTM E 831   |
| CTE, -40°C to 40°C, xflow                  | 1.1E-04       | 1/°C                    | ASTM E 831   |
| CTE, -40°C to 40°C, flow                   | 8.3E-05       | 1/°C                    | ISO 11359-2  |
| CTE, -40°C to 40°C, xflow                  | 8.9E-05       | 1/°C                    | ISO 11359-2  |
| Vicat Softening Temp, Rate B/50            | 92            | °C                      | ISO 306      |
| Vicat Softening Temp, Rate B/120           | 97            | °C                      | ISO 306      |
| HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm    | 82            | °C                      | ISO 75/Ae    |
| <b>PHYSICAL</b>                            |               |                         |              |
| Specific Gravity                           | 1.2           | -                       | ASTM D 792   |
| Mold Shrinkage, flow, 3.2 mm               | 0.5 - 0.8     | %                       | SABIC Method |
| Mold Shrinkage, xflow, 3.2 mm              | 0.4 - 0.6     | %                       | SABIC Method |
| Melt Flow Rate, 265°C/2.16kg               | 10            | g/10 min                | ASTM D 1238  |
| Melt Flow Rate, 300°C/1.2 kgf              | 14            | g/10 min                | ASTM D 1238  |
| Density                                    | 1.16          | g/cm <sup>3</sup>       | ISO 1183     |
| Water Absorption, (23°C/sat)               | 0.37          | %                       | ISO 62       |
| Moisture Absorption (23°C / 50% RH)        | 0.15          | %                       | ISO 62       |
| Melt Volume Rate, MVR at 265°C/2.16 kg     | 10            | cm <sup>3</sup> /10 min | ISO 1133     |
| Melt Volume Rate, MVR at 300°C/1.2 kg      | 13            | cm <sup>3</sup> /10 min | ISO 1133     |
| <b>OPTICAL</b>                             |               |                         |              |
| Light Transmission                         | 85            | %                       | ASTM D 1003  |
| Haze                                       | 4             | %                       | ASTM D 1003  |

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| PROCESSING PARAMETERS       | TYPICAL VALUE | UNIT |
|-----------------------------|---------------|------|
| <b>Injection Molding</b>    |               |      |
| Drying Temperature          | 65 - 75       | °C   |
| Drying Time                 | 3 - 5         | hrs  |
| Drying Time (Cumulative)    | 8             | hrs  |
| Maximum Moisture Content    | 0.02          | %    |
| Melt Temperature            | 245 - 265     | °C   |
| Nozzle Temperature          | 245 - 265     | °C   |
| Front - Zone 3 Temperature  | 245 - 265     | °C   |
| Middle - Zone 2 Temperature | 240 - 260     | °C   |
| Rear - Zone 1 Temperature   | 240 - 250     | °C   |
| Mold Temperature            | 45 - 60       | °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   |

• Parts may initially appear hazy directly from the mold, but will clear upon reaching ambient temperature.

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Source, GMD, Last Update: 02/20/2006



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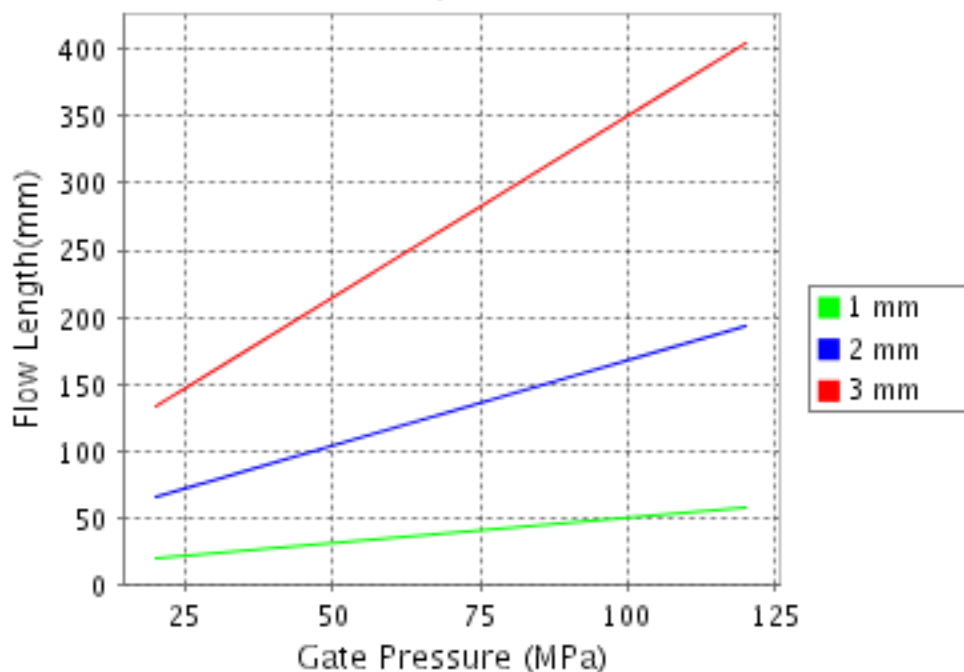
### CALCULATED FLOW LENGTH INDICATION

Moldflow® Radial Flow Analysis

Xylex\* X8210

Melt Temperature : 280°C

Mold Temperature : 90°C



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

® Moldflow is a registered trademark of the Moldflow Corporation.

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