



**XYLEX™ Resin X8300**  
**Americas: COMMERCIAL**

PC+Polyester, UV Stabilized, Transparent

| TYPICAL PROPERTIES <sup>1</sup>              | TYPICAL VALUE | Unit                | Standard    |
|--|---------------|---------------------|-------------|
| <b>MECHANICAL</b>                            |               |                     |             |
| Tensile Stress, yld, Type I, 50 mm/min       | 470           | 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                   | 15400         | kgf/cm <sup>2</sup> | ASTM D 638  |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 720           | kgf/cm <sup>2</sup> | ASTM D 790  |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 17100         | kgf/cm <sup>2</sup> | ASTM D 790  |
| Hardness, Shore D, 10S reading               | 73            | -                   | ASTM D 2240 |
| Tensile Stress, yield, 50 mm/min             | 55            | MPa                 | ISO 527     |
| Tensile Stress, break, 50 mm/min             | 54            | MPa                 | ISO 527     |
| Tensile Strain, yield, 50 mm/min             | >5            | %                   | ISO 527     |
| Tensile Strain, break, 50 mm/min             | >200          | %                   | ISO 527     |
| Tensile Modulus, 1 mm/min                    | 1600          | MPa                 | ISO 527     |
| Flexural Stress, break, 2 mm/min             | 78            | MPa                 | ISO 178     |
| Flexural Modulus, 2 mm/min                   | 1700          | MPa                 | ISO 178     |
| <b>IMPACT</b>                                |               |                     |             |
| Izod Impact, notched, 23°C                   | 114           | cm-kgf/cm           | ASTM D 256  |
| Izod Impact, notched, -30°C                  | 7             | cm-kgf/cm           | ASTM D 256  |
| Instrumented Impact Total Energy, 23°C       | 968           | cm-kgf              | ASTM D 3763 |
| Izod Impact, notched 80*10*4 +23°C           | 8             | kJ/m <sup>2</sup>   | ISO 180/1A  |
| Izod Impact, notched 80*10*4 -10°C           | 5             | kJ/m <sup>2</sup>   | ISO 180/1A  |
| Izod Impact, notched 80*10*4 -30°C           | 7             | kJ/m <sup>2</sup>   | ISO 180/1A  |

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(2) Only typical data for selection purposes. 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) Internal measurements according to UL standards.

(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.  
 (6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

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| <b>IMPACT</b>                              |               |                         |                |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm | 10            | kJ/m <sup>2</sup>       | ISO 179/1eA    |
| <b>THERMAL</b>                             |               |                         |                |
| Vicat Softening Temp, Rate B/50            | 91            | °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                   | 1.05E-04      | 1/°C                    | ASTM E 831     |
| CTE, -40°C to 40°C, xflow                  | 1.05E-04      | 1/°C                    | ASTM E 831     |
| Thermal Conductivity                       | 0.23          | W/m-°C                  | ISO 8302       |
| CTE, -40°C to 40°C, flow                   | 1.05E-04      | 1/°C                    | ISO 11359-2    |
| CTE, -40°C to 40°C, xflow                  | 1.05E-04      | 1/°C                    | ISO 11359-2    |
| CTE, 23°C to 60°C, flow                    | 9.E-05        | 1/°C                    | ISO 11359-2    |
| CTE, 23°C to 60°C, xflow                   | 9.E-05        | 1/°C                    | ISO 11359-2    |
| Ball Pressure Test, approximate maximum    | 85            | °C                      | IEC 60695-10-2 |
| Vicat Softening Temp, Rate B/120           | 96            | °C                      | ISO 306        |
| HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm    | 80            | °C                      | ISO 75/Ae      |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm      | 78            | °C                      | ISO 75/Af      |
| <b>PHYSICAL</b>                            |               |                         |                |
| Specific Gravity                           | 1.2           | -                       | ASTM D 792     |
| Mold Shrinkage, flow, 3.2 mm (5)           | 0.5 - 0.8     | %                       | SABIC Method   |
| Mold Shrinkage, xflow, 3.2 mm (5)          | 0.4 - 0.6     | %                       | SABIC Method   |
| Melt Flow Rate, 265°C/2.16kgf              | 15            | g/10 min                | ASTM D 1238    |
| Density                                    | 1.17          | g/cm <sup>3</sup>       | ISO 1183       |
| Water Absorption, (23°C/sat)               | 0.05          | %                       | ISO 62         |
| Moisture Absorption (23°C / 50% RH)        | 0.2           | %                       | ISO 62         |
| Melt Volume Rate, MVR at 265°C/2.16 kg     | 15            | cm <sup>3</sup> /10 min | ISO 1133       |

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|---|---------------|----------|----------------|
| <b>OPTICAL</b>                                |               |          |                |
| Light Transmission, 2.54 mm                   | 88            | %        | ASTM D 1003    |
| Haze, 2.54 mm                                 | 1             | %        | ASTM D 1003    |
| Refractive Index                              | 1.539         | -        | ISO 489        |
| <b>ELECTRICAL</b>                             |               |          |                |
| Volume Resistivity                            | >1.E+15       | Ohm-cm   | ASTM D 257     |
| Surface Resistivity                           | >1.E+15       | Ohm      | ASTM D 257     |
| Comparative Tracking Index (UL) {PLC}         | 0             | PLC Code | UL 746A        |
| <b>FLAME CHARACTERISTICS</b>                  |               |          |                |
| UL Recognized, 94V-2 Flame Class Rating (3)   | 3             | mm       | UL 94          |
| Glow Wire Flammability Index 750°C, passes at | 1             | mm       | IEC 60695-2-12 |

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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   |

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