



## XENOY™ Resin X5100

### Europe-Africa-Middle East: COMMERCIAL

XENOY X5100 is a semi-crystalline, impact modified PC-PBT blend with excellent flow. (PC+PBT-I).

| TYPICAL PROPERTIES <sup>1</sup>             | TYPICAL VALUE | Unit              | Standard       |
|---------------------------------------------|---------------|-------------------|----------------|
| <b>MECHANICAL</b>                           |               |                   |                |
| Tensile Stress, yield, 50 mm/min            | 54            | MPa               | ISO 527        |
| Tensile Stress, break, 50 mm/min            | 40            | MPa               | ISO 527        |
| Tensile Strain, yield, 50 mm/min            | 4.5           | %                 | ISO 527        |
| Tensile Strain, break, 50 mm/min            | 50            | %                 | ISO 527        |
| Tensile Modulus, 1 mm/min                   | 2150          | MPa               | ISO 527        |
| Flexural Stress, yield, 2 mm/min            | 80            | MPa               | ISO 178        |
| Flexural Modulus, 2 mm/min                  | 2050          | MPa               | ISO 178        |
| <b>IMPACT</b>                               |               |                   |                |
| Izod Impact, notched 80*10*4 +23°C          | 45            | kJ/m <sup>2</sup> | ISO 180/1A     |
| Izod Impact, notched 80*10*4 0°C            | 40            | kJ/m <sup>2</sup> | ISO 180/1A     |
| Izod Impact, notched 80*10*4 -10°C          | 35            | kJ/m <sup>2</sup> | ISO 180/1A     |
| Izod Impact, notched 80*10*4 -20°C          | 20            | kJ/m <sup>2</sup> | ISO 180/1A     |
| Izod Impact, notched 80*10*4 -30°C          | 18            | kJ/m <sup>2</sup> | ISO 180/1A     |
| Charpy 0°C, V-notch Edgew 80*10*3 sp=62mm   | 40            | kJ/m <sup>2</sup> | ISO 179/1eA    |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm  | 50            | kJ/m <sup>2</sup> | ISO 179/1eA    |
| Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm | 15            | kJ/m <sup>2</sup> | ISO 179/1eA    |
| Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm | n.b.          | kJ/m <sup>2</sup> | ISO 179/1eU    |
| <b>THERMAL</b>                              |               |                   |                |
| Thermal Conductivity                        | 0.2           | W/m-°C            | ISO 8302       |
| CTE, -40°C to 40°C, xflow                   | 8.E-05        | 1/°C              | ISO 11359-2    |
| CTE, 23°C to 80°C, flow                     | 8.5E-05       | 1/°C              | ISO 11359-2    |
| Ball Pressure Test, 75°C +/- 2°C            | PASSES        | -                 | IEC 60695-10-2 |
| Vicat Softening Temp, Rate A/50             | 135           | °C                | ISO 306        |



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| <b>THERMAL</b>                              |               |                         |              |
| Vicat Softening Temp, Rate B/50             | 117           | °C                      | ISO 306      |
| Vicat Softening Temp, Rate B/120            | 120           | °C                      | ISO 306      |
| HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm     | 105           | °C                      | ISO 75/Be    |
| HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm     | 84            | °C                      | ISO 75/Ae    |
| <b>PHYSICAL</b>                             |               |                         |              |
| Mold Shrinkage on Tensile Bar, flow (2) (5) | 0.7 - 1       | %                       | SABIC Method |
| Density                                     | 1.22          | g/cm <sup>3</sup>       | ISO 1183     |
| Water Absorption, (23°C/sat)                | 0.5           | %                       | ISO 62       |
| Moisture Absorption (23°C / 50% RH)         | 0.15          | %                       | ISO 62       |
| Melt Volume Rate, MVR at 250°C/2.16 kg      | 13            | cm <sup>3</sup> /10 min | ISO 1133     |
| Melt Viscosity, 260°C, 1500 sec-1           | 215           | Pa-s                    | ISO 11443    |



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| 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   |