

## XENOY™ RESIN X4850

REGION ASIA

### DESCRIPTION

XENOY X4850 is a 12% mineral filled PC/PBT blend with low CTE, high modulus, high ductile PC/PBT blend. Furthermore, this resin provides high chemical resistance, very low creep, excellent fatigue and high heat dimensional stability. XENOY X4850 could be positioned for body panels, window rails, safety equipment, housings, door handles, spring-loaded applications, medical device enclosures, EV electric vehicle components.

### TYPICAL PROPERTY VALUES

Revision 20260509

| PROPERTIES                                   | TYPICAL VALUES | UNITS     | TEST METHODS |
|----------------------------------------------|----------------|-----------|--------------|
| <b>MECHANICAL</b>                            |                |           |              |
| Tensile Stress, yld, Type I, 50 mm/min       | 65             | MPa       | ASTM D638    |
| Tensile Stress, brk, Type I, 50 mm/min       | 55             | MPa       | ASTM D638    |
| Tensile Stress, yld, Type I, 5 mm/min        | 58             | MPa       | ASTM D638    |
| Tensile Stress, brk, Type I, 5 mm/min        | 60             | MPa       | ASTM D638    |
| Tensile Strain, yld, Type I, 50 mm/min       | 3.7            | %         | ASTM D638    |
| Tensile Strain, brk, Type I, 50 mm/min       | 130            | %         | ASTM D638    |
| Tensile Strain, yld, Type I, 5 mm/min        | 3.8            | %         | ASTM D638    |
| Tensile Strain, brk, Type I, 5 mm/min        | 140            | %         | ASTM D638    |
| Tensile Modulus, 5 mm/min                    | 4000           | MPa       | ASTM D638    |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 99             | MPa       | ASTM D790    |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 3700           | MPa       | ASTM D790    |
| Taber Abrasion, CS-17, 1 kg                  | 30             | mg/1000cy | SABIC method |
| Tensile Stress, yield, 5 mm/min              | 58             | MPa       | ISO 527      |
| Tensile Stress, break, 5 mm/min              | 50             | MPa       | ISO 527      |
| Tensile Stress, yield, 50 mm/min             | 63             | MPa       | ISO 527      |
| Tensile Stress, break, 50 mm/min             | 45             | MPa       | ISO 527      |
| Tensile Strain, yield, 5 mm/min              | 3.4            | %         | ISO 527      |
| Tensile Strain, break, 5 mm/min              | 80             | %         | ISO 527      |
| Tensile Strain, yield, 50 mm/min             | 3.5            | %         | ISO 527      |
| Tensile Strain, break, 50 mm/min             | 30             | %         | ISO 527      |
| Tensile Modulus, 1 mm/min                    | 3850           | MPa       | ISO 527      |
| Flexural Stress, yield, 2 mm/min             | 94             | MPa       | ISO 178      |
| Flexural Modulus, 2 mm/min                   | 3500           | MPa       | ISO 178      |
| Ball Indentation Hardness, H358/30           | 105            | MPa       | ISO 2039-1   |
| <b>IMPACT</b>                                |                |           |              |
| Izod Impact, notched, 23°C                   | 180            | J/m       | ASTM D256    |
| Izod Impact, notched, 0°C                    | 120            | J/m       | ASTM D256    |
| Izod Impact, notched, -30°C                  | 100            | J/m       | ASTM D256    |
| Multiaxial Impact                            | 100            | J         | ISO 6603     |
| Instrumented Dart Impact Total Energy, 23°C  | 60             | J         | ASTM D3763   |
| Instrumented Impact Total Energy, -20°C      | 60             | J         | ASTM D3763   |
| Izod Impact, unnotched 80°10°4 +23°C         | NB             | kJ/m²     | ISO 180/1U   |
| Izod Impact, unnotched 80°10°4 -30°C         | NB             | kJ/m²     | ISO 180/1U   |
| Izod Impact, notched 80°10°4 +23°C           | 20             | kJ/m²     | ISO 180/1A   |

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| PROPERTIES                                  | TYPICAL VALUES | UNITS      | TEST METHODS |
|---------------------------------------------|----------------|------------|--------------|
| Izod Impact, notched 80°10°4 0°C            | 11             | kJ/m²      | ISO 180/1A   |
| Izod Impact, notched 80°10°4 -30°C          | 7              | kJ/m²      | ISO 180/1A   |
| Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm  | 20             | kJ/m²      | ISO 179/1eA  |
| Charpy -30°C, V-notch Edgew 80°10°4 sp=62mm | 11             | kJ/m²      | ISO 179/1eA  |
| Charpy 23°C, Unnotch Edgew 80°10°4 sp=62mm  | NB             | kJ/m²      | ISO 179/1eU  |
| Charpy -30°C, Unnotch Edgew 80°10°4 sp=62mm | NB             | kJ/m²      | ISO 179/1eU  |
| <b>THERMAL</b>                              |                |            |              |
| Vicat Softening Temp, Rate B/50             | 134            | °C         | ASTM D1525   |
| HDT, 0.45 MPa, 3.2 mm, unannealed           | 125            | °C         | ASTM D648    |
| HDT, 1.82 MPa, 3.2mm, unannealed            | 101            | °C         | ASTM D648    |
| CTE, -40°C to 40°C, flow                    | 5.2E-05        | 1/°C       | ASTM E831    |
| CTE, -40°C to 40°C, xflow                   | 7.5E-05        | 1/°C       | ASTM E831    |
| Thermal Conductivity                        | 0.2            | W/m.°C     | ISO 8302     |
| CTE, -30°C to 80°C, flow                    | 6.3E-05        | 1/°C       | ISO 11359-2  |
| CTE, -30°C to 80°C, xflow                   | 8.1E-05        | 1/°C       | ISO 11359-2  |
| Vicat Softening Temp, Rate B/50             | 133            | °C         | ISO 306      |
| Vicat Softening Temp, Rate B/120            | 135            | °C         | ISO 306      |
| HDT/Bf, 0.45 MPa Flatw 80°10°4 sp=64mm      | 121            | °C         | ISO 75/Bf    |
| HDT/At, 1.8 MPa Flatw 80°10°4 sp=64mm       | 99             | °C         | ISO 75/At    |
| <b>PHYSICAL</b>                             |                |            |              |
| Specific Gravity                            | 1.31           | -          | ASTM D792    |
| Mold Shrinkage, flow, 3.2 mm                | 0.7 – 0.9      | %          | SABIC method |
| Melt Flow Rate, 266°C/5.0 kgf               | 4.5            | g/10 min   | ASTM D1238   |
| Density                                     | 1.31           | g/cm³      | ISO 1183     |
| Water Absorption, (23°C/saturated)          | 0.42           | %          | ISO 62-1     |
| Moisture Absorption (23°C / 50% RH)         | 0.14           | %          | ISO 62       |
| Melt Volume Rate, MVR at 265°C/5.0 kg       | 4              | cm³/10 min | ISO 1133     |
| <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         |              |

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