



PC/ABS with high stiffness and impact performance

| TYPICAL PROPERTIES <sup>1</sup>              | TYPICAL VALUE | Unit      | Standard    |
|--|---------------|-----------|-------------|
| MECHANICAL                                   |               |           |             |
| Tensile Stress, yld, Type I, 5 mm/min        | 610           | kgf/cm²   | ASTM D 638  |
| Tensile Stress, brk, Type I, 5 mm/min        | 560           | kgf/cm²   | ASTM D 638  |
| Tensile Strain, yld, Type I, 5 mm/min        | 5             | %         | ASTM D 638  |
| Tensile Strain, brk, Type I, 5 mm/min        | 100           | %         | ASTM D 638  |
| Tensile Modulus, 5 mm/min                    | 34600         | kgf/cm²   | ASTM D 638  |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 960           | kgf/cm²   | ASTM D 790  |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 31600         | kgf/cm²   | ASTM D 790  |
| Tensile Stress, yield, 5 mm/min              | 56            | MPa       | ISO 527     |
| Tensile Stress, break, 5 mm/min              | 55            | MPa       | ISO 527     |
| Tensile Strain, yield, 5 mm/min              | 5             | %         | ISO 527     |
| Tensile Strain, break, 5 mm/min              | 100           | %         | ISO 527     |
| Tensile Modulus, 1 mm/min                    | 3100          | MPa       | ISO 527     |
| Flexural Stress, yield, 2 mm/min             | 95            | MPa       | ISO 178     |
| Flexural Modulus, 2 mm/min                   | 3100          | MPa       | ISO 178     |
| IMPACT                                       |               |           |             |
| Izod Impact, notched, 23°C                   | 50            | cm-kgf/cm | ASTM D 256  |
| Izod Impact, notched, -30°C                  | 12            | cm-kgf/cm | ASTM D 256  |
| Instrumented Impact Total Energy, 23°C       | 662           | cm-kgf    | ASTM D 3763 |
| Izod Impact, notched 80*10*3 +23°C           | 45            | kJ/m²     | ISO 180/1A  |
| Izod Impact, notched 80*10*3 -30°C           | 10            | kJ/m²     | ISO 180/1A  |
| Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm   | 45            | kJ/m²     | ISO 179/1eA |
| Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm  | 10            | kJ/m²     | ISO 179/1eA |

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### Source GMD, last updated:

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| YPICAL PROPERTIES <sup>1</sup>        | TYPICAL VALUE | Unit                    | Standard       |
|---------------------------------------|---------------|-------------------------|----------------|
| THERMAL                               |               |                         |                |
| Vicat Softening Temp, Rate B/50       | 138           | °C                      | ASTM D 1525    |
| HDT, 1.82 MPa, 3.2mm, unannealed      | 118           | °C                      | ASTM D 648     |
| CTE, -40°C to 40°C, flow              | 6.E-05        | 1/°C                    | ASTM E 831     |
| CTE, -40°C to 40°C, xflow             | 7.E-05        | 1/°C                    | ASTM E 831     |
| Thermal Conductivity                  | 0.2           | W/m-°C                  | ISO 8302       |
| CTE, -40°C to 40°C, flow              | 6.E-05        | 1/°C                    | ISO 11359-2    |
| CTE, -40°C to 40°C, xflow             | 7.E-05        | 1/°C                    | ISO 11359-2    |
| Ball Pressure Test, 125°C +/- 2°C     | PASSES        | -                       | IEC 60695-10-2 |
| Vicat Softening Temp, Rate B/50       | 138           | °C                      | ISO 306        |
| Vicat Softening Temp, Rate B/120      | 140           | °C                      | ISO 306        |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 118           | °C                      | ISO 75/Af      |
| PHYSICAL                              |               |                         |                |
| Specific Gravity                      | 1.22          | -                       | ASTM D 792     |
| Mold Shrinkage, flow, 3.2 mm (5)      | 0.7 - 0.8     | %                       | SABIC Method   |
| Melt Flow Rate, 260°C/5.0 kgf         | 11            | g/10 min                | ASTM D 1238    |
| Density                               | 1.22          | g/cm³                   | ISO 1183       |
| Water Absorption, (23°C/sat)          | 0.4           | %                       | ISO 62         |
| Moisture Absorption (23°C / 50% RH)   | 0.1           | %                       | ISO 62         |
| Melt Volume Rate, MVR at 260°C/5.0 kg | 9             | cm <sup>3</sup> /10 min | ISO 1133       |

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| PROCESSING PARAMETERS       | TYPICAL VALUE | Unit |  |
|-----------------------------|---------------|------|--|
| Injection Molding           |               |      |  |
| Drying Temperature          | 120 - 110     | °C   |  |
| Drying Time                 | 2 - 6         | hrs  |  |
| Maximum Moisture Content    | 0.04          | %    |  |
| Melt Temperature            | 270 - 300     | °C   |  |
| Nozzle Temperature          | 260 - 290     | °C   |  |
| Front - Zone 3 Temperature  | 270 - 300     | °C   |  |
| Middle - Zone 2 Temperature | 265 - 290     | °C   |  |
| Rear - Zone 1 Temperature   | 260 - 270     | °C   |  |
| Mold Temperature            | 60 - 100      | °C   |  |
| Back Pressure               | 0.3 - 0.7     | MPa  |  |
| Screw Speed                 | 40 - 70       | rpm  |  |
| Shot to Cylinder Size       | 30 - 80       | %    |  |
| Vent Depth                  | 0.038 - 0.076 | mm   |  |

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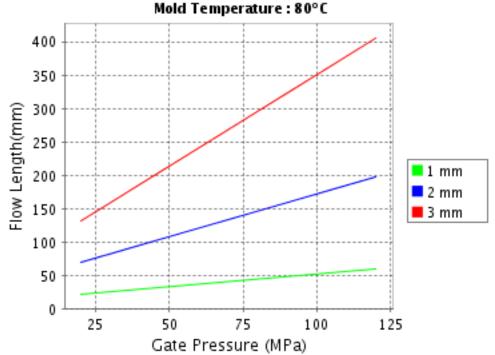
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# CALCULATED FLOW LENGTH INDICATION Moldflow® Radial Flow Analysis

Cycoloy\* XCM830 Melt Temperature: 285°C



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

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