

## SABIC Innovative Plastics Cycloy® XCM830 PC+ABS (Asia Pacific)

Category : Polymer , Thermoplastic , ABS Polymer , Polycarbonate/ABS Alloy, Unreinforced , Polycarbonate (PC)

### Material Notes:

PC/ABS with high stiffness and impact performance

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Cycloy-XCM830-PCABS-Asia-Pacific.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycloy-XCM830-PCABS-Asia-Pacific.php)

| Physical Properties            | Metric   | English  | Comments                                |
|--------------------------------|--|--|---|
| Specific Gravity               | 1.22 g/cc  | 1.22 g/cc  | ASTM D792                               |
| Density                        | 1.22 g/cc  | 0.0441 lb/in <sup>3</sup>                            | ISO 1183                                |
| Moisture Absorption            | 0.100 %  | 0.100 %  | 23°C / 50% RH; ISO 62                   |
| Water Absorption at Saturation | 0.40 %   | 0.40 %   | ISO 62                                  |
| Linear Mold Shrinkage, Flow    | 0.0070 - 0.0080 cm/cm<br>@Thickness 3.20 mm          | 0.0070 - 0.0080 in/in<br>@Thickness 0.126 in         | SABIC Method                            |
| Melt Flow                      | 11 g/10 min<br>@Load 5.00 kg,<br>Temperature 260 °C  | 11 g/10 min<br>@Load 11.0 lb,<br>Temperature 500 °F  | ASTM D1238                              |
| Melt Index of Compound         | 9.0 g/10 min<br>@Load 5.00 kg,<br>Temperature 260 °C | 9.0 g/10 min<br>@Load 11.0 lb,<br>Temperature 500 °F | MVR [cm <sup>3</sup> /10 min]; ISO 1133 |

| Mechanical Properties     | Metric   | English  | Comments                    |
|---------------------------|----------|----------|-----------------------------|
| Tensile Strength at Break | 55.0 MPa | 7980 psi | Type I, 5 mm/min; ASTM D638 |
|                           | 55.0 MPa | 7980 psi | 5 mm/min; ISO 527           |
| Tensile Strength, Yield   | 56.0 MPa | 8120 psi | 5 mm/min; ISO 527           |
|                           | 60.0 MPa | 8700 psi | Type I, 5 mm/min; ASTM D638 |
| Elongation at Break       | 100 %    | 100 %    | Type I, 5 mm/min; ASTM D638 |
|                           | 100 %    | 100 %    | 5 mm/min; ISO 527           |
| Elongation at Yield       | 5.0 %    | 5.0 %    | Type I, 5 mm/min; ASTM D638 |
|                           | 5.0 %    | 5.0 %    | 5 mm/min; ISO 527           |
| Tensile Modulus           | 3.10 GPa | 450 ksi  | 1 mm/min; ISO 527           |
|                           | 3.40 GPa | 493 ksi  | 5 mm/min; ASTM D638         |

| Mechanical Properties      | Metric <sup>Pa</sup>   | English <sup>psi</sup>     | Comments                           |
|----------------------------|------------------------|----------------------------|------------------------------------|
|                            | 95.0 MPa               | 13800 psi                  | 2 mm/min; ISO 178                  |
| Flexural Modulus           | 3.10 GPa               | 450 ksi                    | 1.3 mm/min, 50 mm span; ASTM D790  |
|                            | 3.10 GPa               | 450 ksi                    | 2 mm/min; ISO 178                  |
| Izod Impact, Notched       | 5.00 J/cm              | 9.37 ft-lb/in              | ASTM D256                          |
|                            | 1.20 J/cm              | 2.25 ft-lb/in              | ASTM D256                          |
|                            | @Temperature -30.0 °C  | @Temperature -22.0 °F      |                                    |
| Izod Impact, Notched (ISO) | 45.0 kJ/m <sup>2</sup> | 21.4 ft-lb/in <sup>2</sup> | 80*10*3; ISO 180/1A                |
|                            | 10.0 kJ/m <sup>2</sup> | 4.76 ft-lb/in <sup>2</sup> | 80*10*3; ISO 180/1A                |
|                            | @Temperature -30.0 °C  | @Temperature -22.0 °F      |                                    |
| Charpy Impact, Notched     | 4.50 J/cm <sup>2</sup> | 21.4 ft-lb/in <sup>2</sup> | Edgew 80*10*3 sp=62mm; ISO 179/1eA |
|                            | 1.00 J/cm <sup>2</sup> | 4.76 ft-lb/in <sup>2</sup> | Edgew 80*10*3 sp=62mm; ISO 179/1eA |
|                            | @Temperature -30.0 °C  | @Temperature -22.0 °F      |                                    |
| Dart Drop, Total Energy    | 65.0 J                 | 47.9 ft-lb                 | ASTM D3763                         |
|                            | @Temperature 23.0 °C   | @Temperature 73.4 °F       |                                    |

| Thermal Properties                          | Metric                       | English                            | Comments                          |
|---|------------------------------|------------------------------------|-----------------------------------|
| CTE, linear, Parallel to Flow               | 60.0 µm/m-°C                 | 33.3 µin/in-°F                     | ASTM E 831                        |
|   | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F        |                                   |
|   | 60.0 µm/m-°C                 | 33.3 µin/in-°F                     | ISO 11359-2                       |
|   | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F        |                                   |
| CTE, linear, Transverse to Flow             | 70.0 µm/m-°C                 | 38.9 µin/in-°F                     | ASTM E 831                        |
|   | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F        |                                   |
|   | 70.0 µm/m-°C                 | 38.9 µin/in-°F                     | ISO 11359-2                       |
|   | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F        |                                   |
| Thermal Conductivity                        | 0.200 W/m-K                  | 1.39 BTU-in/hr-ft <sup>2</sup> -°F | ISO 8302                          |
| Deflection Temperature at 1.8 MPa (264 psi) | 118 °C                       | 244 °F                             | Flatw 80*10*4 sp=64mm; ISO 75/ Af |

| Thermal Properties    | 118 °C<br>Metric   | 244 °F<br>English   | Comments              |
|-----------------------|--------------------|---------------------|-----------------------|
|                       | @Thickness 3.20 mm | @Thickness 0.126 in | Rate B/50; ASTM D648  |
| Vicat Softening Point | 138 °C             | 280 °F              | Rate B/50; ASTM D1525 |
|                       | 138 °C             | 280 °F              | Rate B/50; ISO 306    |
|                       | 140 °C             | 284 °F              | Rate B/120; ISO 306   |

| Descriptive Properties            | Value  | Comments       |
|-----------------------------------|--------|----------------|
| Ball Pressure Test, 125°C +/- 2°C | PASSES | IEC 60695-10-2 |

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