

SABIC Innovative Plastics Cycloy® CE8510 PC+ABS

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

Material Notes:

Extrusion grade PC/ABS. Low viscosity, high impact and ductility. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycloy-CE8510-PCABS.php

| Physical Properties | Metric | English | Comments |
|------------------------------------|--|--|--|
| Specific Gravity | 1.14 g/cc | 1.14 g/cc | ASTM D 792 |
| Density | 1.14 g/cc | 0.0412 lb/in ³ | ISO 1183 |
| Moisture Absorption at Equilibrium | 0.10 % | 0.10 % | 23°C / 50% RH; ISO 62 |
| Water Absorption at Saturation | 0.10 % @Temperature 23.0 °C | 0.10 % @Temperature 73.4 °F | ISO 62 |
| Linear Mold Shrinkage, Flow | 0.0050 - 0.0070 cm/cm @Thickness 3.20 mm | 0.0050 - 0.0070 in/in @Thickness 0.126 in | SABIC Method |
| Linear Mold Shrinkage, Transverse | 0.0050 - 0.0070 cm/cm @Thickness 3.20 mm | 0.0050 - 0.0070 in/in @Thickness 0.126 in | SABIC Method |
| Melt Flow | 8.5 g/10 min @Load 5.00 kg, Temperature 260 °C | 8.5 g/10 min @Load 11.0 lb, Temperature 500 °F | ASTM D 1238 |
| | 10 g/10 min @Load 5.00 kg, Temperature 265 °C | 10 g/10 min @Load 11.0 lb, Temperature 509 °F | [cm ³ /10 min] Melt Volume Rate; ISO 1133 |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|----------|----------|-------------------------------|
| Tensile Strength at Break | 45.0 MPa | 6530 psi | 50 mm/min; ISO 527 |
| | 56.0 MPa | 8120 psi | Type I, 50 mm/min; ASTM D 638 |
| Tensile Strength, Yield | 50.0 MPa | 7250 psi | 50 mm/min; ISO 527 |
| | 57.0 MPa | 8270 psi | Type I, 50 mm/min; ASTM D 638 |
| Elongation at Break | >= 50 % | >= 50 % | 50 mm/min; ISO 527 |
| | 125 % | 125 % | Type I, 50 mm/min; ASTM D 638 |
| Elongation at Yield | 4.0 % | 4.0 % | 50 mm/min; ISO 527 |

| Mechanical Properties | Metric | English | Comments |
|----------------------------|------------------------|----------------------------|---|
| Tensile Modulus | 2.17 GPa | 315 ksi | 5 mm/min; ASTM D 638 |
| | 2.25 GPa | 326 ksi | 1 mm/min; ISO 527 |
| Flexural Yield Strength | 85.0 MPa | 12300 psi | 1.3 mm/min, 50 mm span; ASTM D 790 |
| | 85.0 MPa | 12300 psi | 2 mm/min; ISO 178 |
| Flexural Modulus | 2.30 GPa | 334 ksi | 2 mm/min; ISO 178 |
| | 2.35 GPa | 341 ksi | 1.3 mm/min, 50 mm span; ASTM D 790 |
| Izod Impact, Notched | 5.30 J/cm | 9.93 ft-lb/in | ASTM D 256 |
| | @Temperature -30.0 °C | @Temperature -22.0 °F | |
| | 6.50 J/cm | 12.2 ft-lb/in | ASTM D 256 |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | |
| Izod Impact, Notched (ISO) | 35.0 kJ/m ² | 16.7 ft-lb/in ² | 80*10*3; ISO 180/1A |
| | @Temperature -30.0 °C | @Temperature -22.0 °F | |
| | 50.0 kJ/m ² | 23.8 ft-lb/in ² | 80*10*3; ISO 180/1A |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | |
| Charpy Impact, Notched | 3.50 J/cm ² | 16.7 ft-lb/in ² | V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA |
| | @Temperature -30.0 °C | @Temperature -22.0 °F | |
| | 5.00 J/cm ² | 23.8 ft-lb/in ² | V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | |
| Impact Test | 60.0 J | 44.3 ft-lb | Instrumented Impact Total Energy; ASTM D 3763 |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | |

| Thermal Properties | Metric | English | Comments |
|---------------------------------|------------------------------|-----------------------------|-------------|
| CTE, linear, Parallel to Flow | 72.0 µm/m-°C | 40.0 µin/in-°F | ASTM E 831 |
| | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F | |
| | 72.0 µm/m-°C | 40.0 µin/in-°F | ISO 11359-2 |
| | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F | |
| CTE, linear, Transverse to Flow | 80.0 µm/m-°C | 44.4 µin/in-°F | ASTM E 831 |
| | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F | |

| Thermal Properties | Metric Metric/m-°C | English English/in-°F | Comments |
|---|------------------------------|-------------------------------|----------------------------------|
| | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F | ISO 11359-2 |
| Deflection Temperature at 0.46 MPa (66 psi) | 124 °C @Thickness 3.20 mm | 255 °F @Thickness 0.126 in | unannealed; ASTM D 648 |
| Deflection Temperature at 1.8 MPa (264 psi) | 120 °C | 248 °F | Flatw 80*10*4 sp=64mm; ISO 75/Af |
| | 107 °C @Thickness 3.20 mm | 225 °F @Thickness 0.126 in | unannealed; ASTM D 648 |
| Vicat Softening Point | 118 °C | 244 °F | Rate B/50; ASTM D 1525 |
| | 118 °C | 244 °F | Rate B/50; ISO 306 |
| | 122 °C | 252 °F | Rate B/120; ISO 306 |

| Descriptive Properties | Value | Comments |
|----------------------------------|--------|----------------|
| Ball Pressure Test, 75°C +/- 2°C | PASSES | IEC 60695-10-2 |

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