

SABIC Innovative Plastics Cycolac® GX3800F ABS

Category : Polymer , Thermoplastic , ABS Polymer

Material Notes:

High impact ABS for sheet extrusion and blow molding applications. FDA food contact compliant.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycolac-GX3800F-ABS.php

| Physical Properties | Metric | English | Comments |
|-----------------------------|--|--|--|
| Specific Gravity | 1.03 g/cc | 1.03 g/cc | ASTM D792 |
| Viscosity | 1.40e+6 cP | 1.40e+6 cP | Melt Viscosity, 240°C, 100 sec-1; ASTM D3825 |
| Linear Mold Shrinkage, Flow | 0.0060 - 0.0080 cm/cm @Thickness 3.20 mm | 0.0060 - 0.0080 in/in @Thickness 0.126 in | SABIC Method |
| Melt Index of Compound | 4.0 g/10 min @Load 10.0 kg, Temperature 220 °C | 4.0 g/10 min @Load 22.0 lb, Temperature 428 °F | MVR [cm ³ /10 min]; ISO 1133 |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|------------------------------------|--|-----------------------------------|
| Tensile Strength at Break | 30.0 MPa | 4350 psi | Type I, 5 mm/min; ASTM D638 |
| Tensile Strength, Yield | 39.0 MPa | 5660 psi | Type I, 5 mm/min; ASTM D638 |
| Elongation at Break | 31.6 % | 31.6 % | Type I, 5 mm/min; ASTM D638 |
| Elongation at Yield | 3.1 % | 3.1 % | Type I, 5 mm/min; ASTM D638 |
| Tensile Modulus | 2.08 GPa | 302 ksi | 5 mm/min; ASTM D638 |
| Flexural Yield Strength | 66.0 MPa | 9570 psi | 1.3 mm/min, 50 mm span; ASTM D790 |
| Flexural Modulus | 2.16 GPa | 313 ksi | 1.3 mm/min, 50 mm span; ASTM D790 |
| Izod Impact, Notched | 4.32 J/cm | 8.09 ft-lb/in | ASTM D256 |
| | 2.99 J/cm @Temperature -30.0 °C | 5.60 ft-lb/in @Temperature -22.0 °F | ASTM D256 |
| Dart Drop, Total Energy | 50.0 J @Temperature 23.0 °C | 36.9 ft-lb @Temperature 73.4 °F | ASTM D3763 |

| Thermal Properties | Metric | English | Comments |
|--------------------|--------|---------|----------|
|--------------------|--------|---------|----------|

| Thermal Properties | 101 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ Metric | 56.1 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ English | Comments |
|---|---|---|-----------------------|
| CTE, linear, Parallel to Flow | @Temperature -40.0 - 40.0 $^\circ\text{C}$ | @Temperature -40.0 - 104 $^\circ\text{F}$ | ASTM E 831 |
| CTE, linear, Transverse to Flow | 104 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature -40.0 - 40.0 $^\circ\text{C}$ | 57.8 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature -40.0 - 104 $^\circ\text{F}$ | ASTM E 831 |
| Deflection Temperature at 0.46 MPa (66 psi) | 93.0 $^\circ\text{C}$ @Thickness 3.20 mm | 199 $^\circ\text{F}$ @Thickness 0.126 in | unannealed; ASTM D648 |
| Deflection Temperature at 1.8 MPa (264 psi) | 80.0 $^\circ\text{C}$ @Thickness 3.20 mm | 176 $^\circ\text{F}$ @Thickness 0.126 in | unannealed; ASTM D648 |
| Vicat Softening Point | 106 $^\circ\text{C}$ | 223 $^\circ\text{F}$ | Rate B/50; ASTM D1525 |

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