

Cycloloy* Resin FXC810SK

Americas: COMMERCIAL

Color package may affect performance. Visual Fx PC+ABS in various metallic (sparkle) colors. High heat/good flow characteristics. Appliance/automotive/telecommunication uses.

Property

| TYPICAL PROPERTIES ⁽¹⁾ | | | |
|--|---------|-------------------|----------------|
| MECHANICAL | Value | Unit | Standard |
| Tensile Stress, yld, Type I, 50 mm/min | 51 | MPa | ASTM D 638 |
| Tensile Stress, brk, Type I, 50 mm/min | 44 | MPa | ASTM D 638 |
| Tensile Strain, yld, Type I, 50 mm/min | 5 | % | ASTM D 638 |
| Tensile Strain, brk, Type I, 50 mm/min | 50 | % | ASTM D 638 |
| Tensile Modulus, 50 mm/min | 2480 | MPa | ASTM D 638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 75 | MPa | ASTM D 790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2410 | MPa | ASTM D 790 |
| Tensile Stress, yield, 5 mm/min | 55 | MPa | ISO 527 |
| Tensile Stress, break, 5 mm/min | 45 | MPa | ISO 527 |
| Tensile Stress, yield, 50 mm/min | 55 | MPa | ISO 527 |
| Tensile Stress, break, 50 mm/min | 45 | MPa | ISO 527 |
| Tensile Strain, yield, 5 mm/min | 5 | % | ISO 527 |
| Tensile Strain, break, 5 mm/min | 15 | % | ISO 527 |
| Tensile Strain, yield, 50 mm/min | 5 | % | ISO 527 |
| Tensile Strain, break, 50 mm/min | 15 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 2400 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 82 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 2400 | MPa | ISO 178 |
| Hardness, H358/30 | 99 | MPa | ISO 2039-1 |
| Hardness, Rockwell R | 121 | - | ISO 2039-2 |
| IMPACT | Value | Unit | Standard |
| Izod Impact, notched, 23°C | 427 | J/m | ASTM D 256 |
| Instrumented Impact Total Energy, 23°C | 40 | J | ASTM D 3763 |
| Izod Impact, notched 80*10*4 +23°C | 24 | kJ/m ² | ISO 180/1A |
| Izod Impact, notched 80*10*4 -30°C | 12 | kJ/m ² | ISO 180/1A |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm | 25 | kJ/m ² | ISO 179/1eA |
| Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm | 13 | kJ/m ² | ISO 179/1eA |
| THERMAL | Value | Unit | Standard |
| Vicat Softening Temp, Rate B/50 | 143 | °C | ASTM D 1525 |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 131 | °C | ASTM D 648 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 112 | °C | ASTM D 648 |
| CTE, -40°C to 40°C, flow | 7.2E-05 | 1/°C | ASTM E 831 |
| CTE, -40°C to 40°C, xflow | 7.2E-05 | 1/°C | ASTM E 831 |
| Thermal Conductivity | 0.2 | W/m-°C | ISO 8302 |
| CTE, 23°C to 60°C, flow | 8.E-05 | 1/°C | ISO 11359-2 |
| CTE, 23°C to 60°C, xflow | 8.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 | 128 | °C | ISO 306 |

| | | | |
|---|--------------|-------------------------|-----------------|
| Vicat Softening Temp, Rate B/120 | 130 | °C | ISO 306 |
| HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm | 128 | °C | ISO 75/Be |
| HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm | 108 | °C | ISO 75/Ae |
| PHYSICAL | Value | Unit | Standard |
| Specific Gravity | 1.18 | - | ASTM D 792 |
| Mold Shrinkage, flow, 3.2 mm | 0.4 - 0.6 | % | SABIC Method |
| Melt Flow Rate, 260°C/5.0 kgf | 22 | g/10 min | ASTM D 1238 |
| Density | 1.18 | g/cm ³ | ISO 1183 |
| Melt Volume Rate, MVR at 260°C/5.0 kg | 22 | cm ³ /10 min | ISO 1133 |
| ELECTRICAL | Value | Unit | Standard |
| Volume Resistivity | >1.E+15 | Ohm-cm | IEC 60093 |
| Surface Resistivity, ROA | >1.E+15 | Ohm | IEC 60093 |
| Dielectric Strength, in oil, 0.8 mm | 35 | kV/mm | IEC 60243-1 |
| Dielectric Strength, in oil, 1.6 mm | 25 | kV/mm | IEC 60243-1 |
| Dielectric Strength, in oil, 3.2 mm | 17 | kV/mm | IEC 60243-1 |
| Relative Permittivity, 50/60 Hz | 2.8 | - | IEC 60250 |
| Relative Permittivity, 1 MHz | 2.7 | - | IEC 60250 |
| Dissipation Factor, 50/60 Hz | 0.003 | - | IEC 60250 |
| Dissipation Factor, 1 MHz | 0.005 | - | IEC 60250 |

Source GMD, last updated:05/16/2002

Processing

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

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