

CYCOLOY™ FR RESIN C6600

REGION ASIA

DESCRIPTION

CYCOLOY C6600 Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS) resin is a standard grade that can be injection molded. This non-chlorinated, non-brominated flame retardant PC/ABS has a UL V0 & 5VB flame rating. CYCOLOY C6600 resin is an excellent candidate for a wide variety of applications including business equipment, monitors, and enclosures.

TYPICAL PROPERTY VALUES

Revision 20180906

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|----------|--------------|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 50 mm/min | 63 | MPa | ASTM D 638 |
| Tensile Stress, brk, Type I, 50 mm/min | 49 | MPa | ASTM D 638 |
| Tensile Strain, yld, Type I, 50 mm/min | 4 | % | ASTM D 638 |
| Tensile Strain, brk, Type I, 50 mm/min | 80 | % | ASTM D 638 |
| Tensile Modulus, 50 mm/min | 3000 | MPa | ASTM D 638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 94 | MPa | ASTM D 790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2620 | MPa | ASTM D 790 |
| IMPACT | | | |
| Izod Impact, notched, 23°C | 550 | J/m | ASTM D 256 |
| Instrumented Impact Total Energy, 23°C | 51 | J | ASTM D 3763 |
| Instrumented Impact Total Energy, -30°C | 51 | J | ASTM D 3763 |
| THERMAL | | | |
| Vicat Softening Temp, Rate B/50 | 99 | °C | ASTM D 1525 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 83 | °C | ASTM D 648 |
| HDT, 0.45 MPa, 6.4 mm, unannealed | 98 | °C | ASTM D 648 |
| HDT, 1.82 MPa, 6.4 mm, unannealed | 90 | °C | ASTM D 648 |
| Relative Temp Index, Elec | 80 | °C | UL 746B |
| Relative Temp Index, Mech w/impact | 70 | °C | UL 746B |
| Relative Temp Index, Mech w/o impact | 80 | °C | UL 746B |
| PHYSICAL | | | |
| Specific Gravity | 1.19 | - | ASTM D 792 |
| Water Absorption, 24 hours | 0.11 | % | ASTM D 570 |
| Mold Shrinkage, flow, 3.2 mm | 0.4 – 0.6 | % | SABIC method |
| Melt Flow Rate, 260°C/2.16 kgf | 21.5 | g/10 min | ASTM D 1238 |
| ELECTRICAL | | | |
| Volume Resistivity | >1.E+15 | Ohm-cm | IEC 60093 |
| Surface Resistivity, ROA | >1.E+15 | Ohm | IEC 60093 |
| Dielectric Strength, in oil, 3.2 mm | 17 | kV/mm | IEC 60243-1 |
| Relative Permittivity, 1 MHz | 2.7 | - | IEC 60250 |
| Dissipation Factor, 50/60 Hz | 0.004 | - | IEC 60250 |
| Dissipation Factor, 1 MHz | 0.006 | - | IEC 60250 |
| Relative Permittivity, 50/60 Hz | 2.7 | - | IEC 60250 |
| FLAME CHARACTERISTICS | | | |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|----------------|-------|--------------|
| UL Recognized, 94V-2 Flame Class Rating | 0.75 | mm | UL 94 |
| UL Recognized, 94V-0 Flame Class Rating | 1.5 | mm | UL 94 |
| UL Recognized, 94-5VB Rating | 2 | mm | UL 94 |
| INJECTION MOLDING | | | |
| Drying Temperature | 80 – 90 | °C | |
| Drying Time | 3 – 4 | hrs | |
| Drying Time (Cumulative) | 8 | hrs | |
| Maximum Moisture Content | 0.04 | % | |
| Melt Temperature | 245 – 275 | °C | |
| Nozzle Temperature | 245 – 275 | °C | |
| Front - Zone 3 Temperature | 245 – 275 | °C | |
| Middle - Zone 2 Temperature | 220 – 275 | °C | |
| Rear - Zone 1 Temperature | 220 – 255 | °C | |
| Mold Temperature | 60 – 80 | °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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