

# CYCOLOY™ C6600 resin

Polycarbonate + ABS

SABIC Innovative Plastics Asia Pacific

## Message:

Nonbrominated, nonchlorinated FR PC+ABS with balanced flow, impact and hydrolytic stability for a wide variety of applications including business equipment, monitors, enclosures, among others.

| General Information                   |                                                              |
|---------------------------------------|--------------------------------------------------------------|
| UL YellowCard                         | E121562-221038                                               |
| Additive                              | Flame retardancy                                             |
| Features                              | Chlorine Free                                                |
|                                       | Impact resistance, good                                      |
|                                       | Good liquidity                                               |
|                                       | Hydrolysis stability                                         |
|                                       | Bromine-free                                                 |
| Flame retardancy                      |                                                              |
| Uses                                  | Business equipment                                           |
| Processing Method                     | Injection molding                                            |
| Multi-Point Data                      | Coefficient of Thermal Expansion vs. Temperature (ASTM E831) |
|                                       | Flexural DMA (ASTM D4065)                                    |
|                                       | Pressure-Volume-Temperature (PVT - Zoller Method)            |
|                                       | Shear DMA (ASTM D4065)                                       |
|                                       | Specific Heat vs. Temperature (ASTM D3417)                   |
|                                       | Tensile Fatigue                                              |
|                                       | Tensile Stress vs. Strain (ASTM D638)                        |
|                                       | Thermal Conductivity vs. Temperature (ASTM E1530)            |
| Viscosity vs. Shear Rate (ASTM D3835) |                                                              |

| Physical                                  | Nominal Value | Unit              | Test Method     |
|-------------------------------------------|---------------|-------------------|-----------------|
| Specific Gravity                          | 1.19          | g/cm <sup>3</sup> | ASTM D792       |
| Melt Mass-Flow Rate (MFR) (260°C/2.16 kg) | 22            | g/10 min          | ASTM D1238      |
| Molding Shrinkage - Flow (3.20 mm)        | 0.40 - 0.60   | %                 | Internal method |
| Water Absorption (24 hr)                  | 0.11          | %                 | ASTM D570       |
| Mechanical                                | Nominal Value | Unit              | Test Method     |
| Tensile Modulus <sup>1</sup>              | 3000          | MPa               | ASTM D638       |
| Tensile Strength <sup>2</sup>             |               |                   | ASTM D638       |
| Yield                                     | 63.0          | MPa               | ASTM D638       |
| Fracture                                  | 49.0          | MPa               | ASTM D638       |
| Tensile Elongation <sup>3</sup>           |               |                   | ASTM D638       |

|                                                      |                      |             |                         |
|------------------------------------------------------|----------------------|-------------|-------------------------|
| Yield                                                | 4.0                  | %           | ASTM D638               |
| Fracture                                             | 80                   | %           | ASTM D638               |
| Flexural Modulus <sup>4</sup> (50.0 mm Span)         | 2620                 | MPa         | ASTM D790               |
| Flexural Strength <sup>5</sup> (Yield, 50.0 mm Span) | 94.0                 | MPa         | ASTM D790               |
| <b>Impact</b>                                        | <b>Nominal Value</b> | <b>Unit</b> | <b>Test Method</b>      |
| Notched Izod Impact (23°C)                           | 550                  | J/m         | ASTM D256               |
| Instrumented Dart Impact                             |                      |             | ASTM D3763              |
| -30°C, Total Energy                                  | 51.0                 | J           | ASTM D3763              |
| 23°C, Total Energy                                   | 51.0                 | J           | ASTM D3763              |
| <b>Thermal</b>                                       | <b>Nominal Value</b> | <b>Unit</b> | <b>Test Method</b>      |
| Deflection Temperature Under Load                    |                      |             | ASTM D648               |
| 0.45 MPa, unannealed, 6.40mm                         | 98.0                 | °C          | ASTM D648               |
| 1.8 MPa, unannealed, 3.20mm                          | 83.0                 | °C          | ASTM D648               |
| 1.8 MPa, unannealed, 6.40mm                          | 90.0                 | °C          | ASTM D648               |
| Vicat Softening Temperature                          | 99.0                 | °C          | ASTM D1525 <sup>6</sup> |
| RTI Elec                                             | 80.0                 | °C          | UL 746                  |
| RTI Imp                                              | 70.0                 | °C          | UL 746                  |
| RTI                                                  | 80.0                 | °C          | UL 746                  |
| <b>Electrical</b>                                    | <b>Nominal Value</b> | <b>Unit</b> | <b>Test Method</b>      |
| Surface Resistivity                                  | > 1.0E+15            | ohms        | IEC 60093               |
| Volume Resistivity                                   | > 1.0E+15            | ohms·cm     | IEC 60093               |
| Dielectric Strength (3.20 mm, in Oil)                | 17                   | kV/mm       | IEC 60243-1             |
| Relative Permittivity                                |                      |             | IEC 60250               |
| 50 Hz                                                | 2.70                 |             | IEC 60250               |
| 60 Hz                                                | 2.70                 |             | IEC 60250               |
| 1 MHz                                                | 2.70                 |             | IEC 60250               |
| Dissipation Factor                                   |                      |             | IEC 60250               |
| 50 Hz                                                | 4.0E-3               |             | IEC 60250               |
| 60 Hz                                                | 4.0E-3               |             | IEC 60250               |
| 1 MHz                                                | 6.0E-3               |             | IEC 60250               |
| <b>Flammability</b>                                  | <b>Nominal Value</b> | <b>Unit</b> | <b>Test Method</b>      |
| Flame Rating                                         |                      |             | UL 94                   |
| 0.750 mm                                             | V-2                  |             | UL 94                   |
| 1.50 mm                                              | V-0                  |             | UL 94                   |
| 2.00 mm                                              | 5VB                  |             | UL 94                   |
| <b>Injection</b>                                     | <b>Nominal Value</b> | <b>Unit</b> |                         |
| Drying Temperature                                   | 82.0 - 88.0          | °C          |                         |
| Drying Time                                          | 3.0 - 4.0            | hr          |                         |
| Drying Time, Maximum                                 | 8.0                  | hr          |                         |
| Suggested Max Moisture                               | 0.040                | %           |                         |
| Suggested Shot Size                                  | 30 - 80              | %           |                         |
| Rear Temperature                                     | 221 - 254            | °C          |                         |

|                        |               |     |
|------------------------|---------------|-----|
| Middle Temperature     | 221 - 277     | °C  |
| Front Temperature      | 243 - 277     | °C  |
| Nozzle Temperature     | 243 - 277     | °C  |
| Processing (Melt) Temp | 243 - 277     | °C  |
| Mold Temperature       | 60.0 - 82.0   | °C  |
| Back Pressure          | 0.345 - 0.689 | MPa |
| Screw Speed            | 40 - 70       | rpm |
| Vent Depth             | 0.038 - 0.076 | mm  |

#### NOTE

1. 50 mm/min
2. Type 1, 50mm/min
3. Type 1, 50mm/min
4. 1.3 mm/min
5. 1.3 mm/min
6. 标准 B (120°C/h), 载荷2 (50N)

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