# CYCOLOY™ XCY620 resin

Polycarbonate + ABS

SABIC Innovative Plastics

## Message:

PC+ ABS Automotive applications, High Impact and High Flow, ductility at low temperature, excellent properties retention after Hydrolytic and Heat Aging

| General Information | | | |
|---|---|---|---|
| Features | Ductile | | |
| | Good Heat Aging Resistance | | |
| | High Flow | | |
| | High Impact Resistance | | |
| | Hydrolytically Stable | | |
| Uses | Automotive Applications | | |
| Processing Method | Injection Molding | | |
| **Physical** | **Nominal Value** | **Unit** | **Test Method** |
| Specific Gravity | 1.14 | g/cm³ | ASTM D792, ISO 1183 |
| Melt Mass-Flow Rate (MFR) (260°C/5.0 kg) | 22 | g/10 min | ASTM D1238 |
| Melt Volume-Flow Rate (MVR) (260°C/5.0 kg) | 18.0 | cm³/10min | ISO 1133 |
| Molding Shrinkage | | | Internal Method |
| Flow : 3.20 mm | 0.50 to 0.70 | % | |
| Across Flow : 3.20 mm | 0.50 to 0.70 | % | |
| Water Absorption | | | ISO 62 |
| Saturation, 23°C | 0.40 | % | |
| Equilibrium, 23°C, 50% RH | 0.15 | % | |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Modulus | | | |
| -- [1] | 2300 | MPa | ASTM D638 |
| -- | 2200 | MPa | ISO 527-2/1 |
| Tensile Strength | | | |
| Yield [2] | 55.0 | MPa | ASTM D638 |
| Yield | 54.0 | MPa | ISO 527-2/50 |
| Break [3] | 52.0 | MPa | ASTM D638 |
| Break | 51.0 | MPa | ISO 527-2/50 |
| Tensile Elongation | | | |
| Yield [4] | 4.7 | % | ASTM D638 |
| Yield | 4.5 | % | ISO 527-2/50 |
| Break [5] | 120 | % | ASTM D638 |
| Break | 120 | % | ISO 527-2/50 |

| | | | |
|---|---|---|---|
| Flexural Modulus | | | |
| 50.0 mm Span [6] | 2300 | MPa | ASTM D790 |
| -- [7] | 2200 | MPa | ISO 178 |
| Flexural Stress | | | |
| -- | 83.0 | MPa | ISO 178 |
| Yield, 50.0 mm Span [8] | 89.0 | MPa | ASTM D790 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Charpy Notched Impact Strength | | | |
| -30°C [9] | 45 | kJ/m² | ISO 179/1eA |
| 23°C [10] | 70 | kJ/m² | ISO 179/1eA |
| 23°C [11] | 60 | kJ/m² | ISO 179/1eA |
| Notched Izod Impact | | | |
| -30°C | 480 | J/m | ASTM D256 |
| 23°C | 640 | J/m | ASTM D256 |
| -30°C [12] | 45 | kJ/m² | ISO 180/1A |
| 23°C [13] | 55 | kJ/m² | ISO 180/1A |
| 23°C [14] | 70 | kJ/m² | ISO 180/1A |
| Instrumented Dart Impact | | | ASTM D3763 |
| -30°C, Total Energy | 70.0 | J | |
| 23°C, Total Energy | 56.0 | J | |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Heat Deflection Temperature | | | |
| 0.45 MPa, Unannealed, 64.0 mm Span [15] | 126 | °C | ISO 75-2/Bf |
| 1.8 MPa, Unannealed, 3.20 mm | 107 | °C | ASTM D648 |
| 1.8 MPa, Unannealed, 64.0 mm Span [16] | 105 | °C | ISO 75-2/Af |
| Vicat Softening Temperature | | | |
| -- | 127 | °C | ASTM D1525, ISO 306/B50 12 [17] |
| -- | 129 | °C | ISO 306/B120 |
| Ball Pressure Test (75°C) | Pass | | IEC 60695-10-2 |
| CLTE | | | ASTM E831, ISO 11359-2 |
| Flow : -40 to 40°C | 7.0E-5 | cm/cm/°C | |
| Transverse : -40 to 40°C | 7.0E-5 | cm/cm/°C | |
| Thermal Conductivity | 0.20 | W/m/K | ISO 8302 |
| **Electrical** | **Nominal Value** | **Unit** | **Test Method** |
| Surface Resistivity | > 1.0E+15 | ohms | IEC 60093 |
| Volume Resistivity | > 1.0E+15 | ohms·cm | IEC 60093 |
| Electric Strength | | | IEC 60243-1 |
| 0.800 mm, in Oil | 35 | kV/mm | |
| 1.60 mm, in Oil | 25 | kV/mm | |
| 3.20 mm, in Oil | 17 | kV/mm | |
| **Fill Analysis** | **Nominal Value** | **Unit** | **Test Method** |

| | | | |
|---|---|---|---|
| Melt Viscosity (260°C, 1500 sec^-1) | 195 | Pa·s | ISO 11443 |

| Injection | Nominal Value | Unit |
|---|---|---|
| Drying Temperature | 95.0 to 105 | °C |
| Drying Time | 2.0 to 4.0 | hr |
| Drying Time, Maximum | 8.0 | hr |
| Suggested Max Moisture | 0.020 | % |
| Suggested Shot Size | 30 to 80 | % |
| Hopper Temperature | 60.0 to 80.0 | °C |
| Rear Temperature | 230 to 260 | °C |
| Middle Temperature | 250 to 290 | °C |
| Front Temperature | 250 to 290 | °C |
| Nozzle Temperature | 240 to 280 | °C |
| Processing (Melt) Temp | 260 to 290 | °C |
| Mold Temperature | 60.0 to 90.0 | °C |
| Back Pressure | 0.300 to 0.700 | MPa |

| NOTE | |
|---|---|
| 1. | 5.0 mm/min |
| 2. | Type I, 50 mm/min |
| 3. | Type I, 50 mm/min |
| 4. | Type I, 50 mm/min |
| 5. | Type I, 50 mm/min |
| 6. | 1.3 mm/min |
| 7. | 2.0 mm/min |
| 8. | 1.3 mm/min |
| 9. | 80*10*3 sp=62mm |
| 10. | 80*10*3 sp=62mm |
| 11. | 80*10*4 sp=62mm |
| 12. | 80*10*3 |
| 13. | 80*10*4 |
| 14. | 80*10*3 |
| 15. | 80*10*4 mm |
| 16. | 80*10*4 mm |
| 17. | Rate B (120°C/h), Loading 2 (50 N) |



Recommended distributors for this material

## Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China