

# SABIC CYCOLOY™ PC/ABS CP8320物性表

| 属性   | 典型值  | UNITS             | 测试手段        |
|--|------|-------------------|-------------|
| <b>MECHANICAL</b>                            |      |                   |             |
| Tensile Stress, yld, Type I, 50 mm/min       | 45   | MPa               | ASTM D638   |
| Tensile Stress, brk, Type I, 50 mm/min       | 40   | MPa               | ASTM D638   |
| Tensile Strain, yld, Type I, 50 mm/min       | 4    | %                 | ASTM D638   |
| Tensile Strain, brk, Type I, 50 mm/min       | 100  | %                 | ASTM D638   |
| Tensile Modulus, 5 mm/min                    | 2100 | MPa               | ASTM D638   |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 70   | MPa               | ASTM D790   |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 2000 | MPa               | ASTM D790   |
| Tensile Stress, yield, 50 mm/min             | 45   | MPa               | ISO 527     |
| Tensile Stress, break, 50 mm/min             | 40   | MPa               | ISO 527     |
| Tensile Strain, yield, 50 mm/min             | 4    | %                 | ISO 527     |
| Tensile Strain, break, 50 mm/min             | 100  | %                 | ISO 527     |
| Tensile Modulus, 1 mm/min                    | 2100 | MPa               | ISO 527     |
| Flexural Stress, yield, 2 mm/min             | 65   | MPa               | ISO 178     |
| Flexural Modulus, 2 mm/min                   | 2000 | MPa               | ISO 178     |
| <b>IMPACT</b>                                |      |                   |             |
| Izod Impact, notched, 23°C                   | 600  | J/m               | ASTM D256   |
| Izod Impact, notched, -30°C                  | 400  | J/m               | ASTM D256   |
| Instrumented Dart Impact Total Energy, 23°C  | 55   | J                 | ASTM D3763  |
| Izod Impact, unnotched 80*10*4 +23°C         | NB   | kJ/m <sup>2</sup> | ISO 180/1U  |
| Izod Impact, unnotched 80*10*4 -30°C         | NB   | kJ/m <sup>2</sup> | ISO 180/1U  |
| Izod Impact, notched 80*10*4 +23°C           | 60   | kJ/m <sup>2</sup> | ISO 180/1A  |
| Izod Impact, notched 80*10*4 -30°C           | 30   | kJ/m <sup>2</sup> | ISO 180/1A  |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm   | 60   | kJ/m <sup>2</sup> | ISO 179/1eA |

|  |    |                   |             |
|--|----|-------------------|-------------|
| Charpy -30°C, V-notch Edgew<br>80*10*4 sp=62mm | 30 | kJ/m <sup>2</sup> | ISO 179/1eA |
| Charpy 23°C, Unnotch Edgew<br>80*10*4 sp=62mm  | NB | kJ/m <sup>2</sup> | ISO 179/1eU |
| Charpy -30°C, Unnotch Edgew<br>80*10*4 sp=62mm | NB | kJ/m <sup>2</sup> | ISO 179/1eU |

## THERMAL

|  |        |        |                |
|--|--------|--------|----------------|
| Vicat Softening Temp, Rate B/50          | 106    | °C     | ASTM D1525     |
| HDT, 1.82 MPa, 3.2mm,<br>unannealed      | 90     | °C     | ASTM D648      |
| CTE, -40°C to 40°C, flow                 | 9.E-05 | 1/°C   | ASTM E831      |
| CTE, -40°C to 40°C, xflow                | 9.E-05 | 1/°C   | ASTM E831      |
| Thermal Conductivity                     | 0.2    | W/m-°C | ISO 8302       |
| CTE, -40°C to 40°C, flow                 | 9.E-05 | 1/°C   | ISO 11359-2    |
| CTE, -40°C to 40°C, xflow                | 9.E-05 | 1/°C   | ISO 11359-2    |
| Ball Pressure Test, 75°C +/- 2°C         | Pass   | -      | IEC 60695-10-2 |
| Vicat Softening Temp, Rate B/50          | 106    | °C     | ISO 306        |
| Vicat Softening Temp, Rate B/120         | 107    | °C     | ISO 306        |
| HDT/Af, 1.8 MPa Flatw 80*10*4<br>sp=64mm | 92     | °C     | ISO 75/Af      |

## PHYSICAL

|  |         |                         |              |
|--|---------|-------------------------|--------------|
| Specific Gravity                         | 1.1     | -                       | ASTM D792    |
| Mold Shrinkage, flow, 3.2 mm             | 0.5-0.7 | %                       | SABIC method |
| Melt Flow Rate, 260°C/5.0 kgf            | 14      | g/10 min                | ASTM D1238   |
| Density                                  | 1.1     | g/cm <sup>3</sup>       | ISO 1183     |
| Water Absorption, (23°C/saturated)       | 0.3     | %                       | ISO 62-1     |
| Moisture Absorption (23°C / 50%<br>RH)   | 0.1     | %                       | ISO 62       |
| Melt Volume Rate, MVR at<br>260°C/5.0 kg | 13      | cm <sup>3</sup> /10 min | ISO 1133     |

## ELECTRICAL

|                                     |         |       |             |
|-------------------------------------|---------|-------|-------------|
| Volume Resistivity                  | >1.E+15 | Ω.cm  | IEC 60093   |
| Surface Resistivity, ROA            | >1.E+15 | Ω     | 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 |

## Injection Molding

|                             |         |     |
|-----------------------------|---------|-----|
| Drying Temperature          | 95-105  | °C  |
| Drying Time                 | 2-4     | Hrs |
| Maximum Moisture Content    | 0.02    | %   |
| Melt Temperature            | 250-280 | °C  |
| Nozzle Temperature          | 230-270 | °C  |
| Front - Zone 3 Temperature  | 240-280 | °C  |
| Middle - Zone 2 Temperature | 240-280 | °C  |
| Rear - Zone 1 Temperature   | 220-250 | °C  |
| Hopper Temperature          | 60-80   | °C  |
| Mold Temperature            | 60-90   | °C  |

此数据由我们从该材料的生产商处获得。我们尽最大努力确保此数据的准确性，但是我们对这些数据值不承担任何责任，并强烈建议在最终选料前，就数据值与材料供应商进行验证。