

## SABIC Innovative Plastics Cycology® CS9610 PC+ABS

Category : Polymer , Thermoplastic , ABS Polymer , Polycarbonate/ABS Alloy, Unreinforced , Polycarbonate (PC)

### Material Notes:

Cycology® CS9610 is a FR PC/ABS blend using non-brominated and non-chlorinated flame retardant systems, offering optimum mechanical & impact balance and excellent flammability and low smoke behavior. This grade potentially can be considered for a wide variety of applications in areas such as transportation, consumer electronics and electrical equipments.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Cycology-CS9610-PCABS.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycology-CS9610-PCABS.php)

| Physical Properties         | Metric                                              | English                                             | Comments                                |
|-----------------------------|-----------------------------------------------------|-----------------------------------------------------|-----------------------------------------|
| Specific Gravity            | 1.20 g/cc                                           | 1.20 g/cc                                           | ASTM D792                               |
| Linear Mold Shrinkage, Flow | 0.0040 - 0.0060 cm/cm<br>@Thickness 3.20 mm         | 0.0040 - 0.0060 in/in<br>@Thickness 0.126 in        | SABIC Method                            |
| Melt Flow                   | 15 g/10 min<br>@Load 5.00 kg,<br>Temperature 260 °C | 15 g/10 min<br>@Load 11.0 lb,<br>Temperature 500 °F | ASTM D1238                              |
| Melt Index of Compound      | 12 g/10 min<br>@Load 5.00 kg,<br>Temperature 260 °C | 12 g/10 min<br>@Load 11.0 lb,<br>Temperature 500 °F | MVR [cm <sup>3</sup> /10 min]; ISO 1133 |

| Mechanical Properties     | Metric   | English   | Comments                          |
|---------------------------|----------|-----------|-----------------------------------|
| Tensile Strength at Break | 50.0 MPa | 7250 psi  | 50 mm/min; ISO 527                |
|                           | 62.0 MPa | 8990 psi  | Type I, 50 mm/min; ASTM D638      |
| Tensile Strength, Yield   | 62.0 MPa | 8990 psi  | 50 mm/min; ISO 527                |
|                           | 64.0 MPa | 9280 psi  | Type I, 50 mm/min; ASTM D638      |
| Elongation at Break       | >= 45 %  | >= 45 %   | 50 mm/min; ISO 527                |
|                           | 55 %     | 55 %      | Type I, 50 mm/min; ASTM D638      |
| Elongation at Yield       | 4.8 %    | 4.8 %     | 50 mm/min; ISO 527                |
|                           | 5.0 %    | 5.0 %     | Type I, 50 mm/min; ASTM D638      |
| Tensile Modulus           | 2.40 GPa | 348 ksi   | 1 mm/min; ISO 527                 |
|                           | 2.60 GPa | 377 ksi   | 50 mm/min; ASTM D638              |
| Flexural Yield Strength   | 98.0 MPa | 14200 psi | 1.3 mm/min, 50 mm span; ASTM D790 |

| Mechanical Properties      | 98.0 MPa<br>Metric                              | 14200 psi<br>English                                | 2 mm/min; ISO 178<br>Comments      |
|----------------------------|-------------------------------------------------|-----------------------------------------------------|------------------------------------|
| Flexural Modulus           | 2.44 GPa                                        | 354 ksi                                             | 1.3 mm/min, 50 mm span; ASTM D790  |
|                            | 2.50 GPa                                        | 363 ksi                                             | 2 mm/min; ISO 178                  |
| Izod Impact, Notched       | 8.00 J/cm                                       | 15.0 ft-lb/in                                       | ASTM D256                          |
| Izod Impact, Notched (ISO) | 45.0 kJ/m <sup>2</sup>                          | 21.4 ft-lb/in <sup>2</sup>                          | 80*10*3; ISO 180/1A                |
|                            | 15.0 kJ/m <sup>2</sup><br>@Temperature -30.0 °C | 7.14 ft-lb/in <sup>2</sup><br>@Temperature -22.0 °F | 80*10*3; ISO 180/1A                |
| Charpy Impact, Notched     | 4.50 J/cm <sup>2</sup>                          | 21.4 ft-lb/in <sup>2</sup>                          | Edgew 80*10*3 sp=62mm; ISO 179/1eA |
|                            | 1.50 J/cm <sup>2</sup><br>@Temperature -30.0 °C | 7.14 ft-lb/in <sup>2</sup><br>@Temperature -22.0 °F | Edgew 80*10*3 sp=62mm; ISO 179/1eA |
| Dart Drop, Total Energy    | 72.0 J<br>@Temperature 23.0 °C                  | 53.1 ft-lb<br>@Temperature 73.4 °F                  | ASTM D3763                         |

| Thermal Properties                          | Metric                       | English                       | Comments                         |
|---------------------------------------------|------------------------------|-------------------------------|----------------------------------|
| Deflection Temperature at 0.46 MPa (66 psi) | 118 °C<br>@Thickness 3.20 mm | 244 °F<br>@Thickness 0.126 in | unannealed; ASTM D648            |
| Deflection Temperature at 1.8 MPa (264 psi) | 106 °C                       | 223 °F                        | Flatw 80*10*4 sp=64mm; ISO 75/Af |
|                                             | 105 °C<br>@Thickness 3.20 mm | 221 °F<br>@Thickness 0.126 in | unannealed; ASTM D648            |
| Vicat Softening Point                       | 124 °C                       | 255 °F                        | Rate B/50; ISO 306               |
|                                             | 127 °C                       | 261 °F                        | Rate B/120; ISO 306              |
| Flammability, UL94                          | V-0<br>@Thickness 2.00 mm    | V-0<br>@Thickness 0.0787 in   | UL 94                            |
|                                             | 5VB<br>@Thickness 2.00 mm    | 5VB<br>@Thickness 0.0787 in   | UL 94                            |

| Descriptive Properties                 | Value | Comments   |
|----------------------------------------|-------|------------|
| NBS Smoke Density, Flaming, Dmax       | 225   | ASTM E 662 |
| NBS Smoke Density, Flaming, Ds 1.5 min | 40    | ASTM E 662 |
| NBS Smoke Density, Flaming, Ds 4 min   | 150   | ASTM E 662 |

| Descriptive Properties | Value | Comments |
|------------------------|-------|----------|
|------------------------|-------|----------|

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