

## SABIC Innovative Plastics PC0800 PC (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

PC0800 resin is a low flow (MFR = 8 at 300°C/1.2kg), heat stabilized, polycarbonate product designed for use in the custom compounding market. It does not contain UV stabilizer or mold release.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-PC0800-PC-Asia-Pacific.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-PC0800-PC-Asia-Pacific.php)

| Physical Properties                | Metric                                               | English                                              | Comments                                |
|------------------------------------|------------------------------------------------------|------------------------------------------------------|-----------------------------------------|
| Specific Gravity                   | 1.20 g/cc                                            | 1.20 g/cc                                            | ASTM D792                               |
| Density                            | 1.20 g/cc                                            | 0.0434 lb/in <sup>3</sup>                            | ISO 1183                                |
| Moisture Absorption at Equilibrium | 0.35 %                                               | 0.35 %                                               | ASTM D570                               |
| Water Absorption at Saturation     | 0.35 %                                               | 0.35 %                                               | ISO 62                                  |
| Linear Mold Shrinkage, Flow        | 0.0050 - 0.0070 cm/cm                                | 0.0050 - 0.0070 in/in                                | on Tensile Bar; SABIC Method            |
|                                    | 0.0050 - 0.0070 cm/cm<br>@Thickness 3.20 mm          | 0.0050 - 0.0070 in/in<br>@Thickness 0.126 in         | SABIC Method                            |
| Melt Flow                          | 8.0 g/10 min<br>@Load 1.20 kg,<br>Temperature 300 °C | 8.0 g/10 min<br>@Load 2.65 lb,<br>Temperature 572 °F | ASTM D1238                              |
| Melt Index of Compound             | 7.0 g/10 min<br>@Load 1.20 kg,<br>Temperature 300 °C | 7.0 g/10 min<br>@Load 2.65 lb,<br>Temperature 572 °F | MVR [cm <sup>3</sup> /10 min]; ISO 1133 |

| Mechanical Properties   | Metric   | English  | Comments                     |
|-------------------------|----------|----------|------------------------------|
| Hardness, Rockwell R    | 120      | 120      | ASTM D785                    |
|                         | 120      | 120      | ISO 2039-2                   |
| Tensile Strength, Yield | 63.0 MPa | 9140 psi | Type I, 50 mm/min; ASTM D638 |
|                         | 63.0 MPa | 9140 psi | 50 mm/min; ISO 527           |
| Elongation at Break     | >= 70 %  | >= 70 %  | Type I, 50 mm/min; ASTM D638 |
|                         | >= 70 %  | >= 70 %  | 50 mm/min; ISO 527           |
| Elongation at Yield     | 6.0 %    | 6.0 %    | Type I, 50 mm/min; ASTM D638 |
|                         | 6.0 %    | 6.0 %    | 50 mm/min; ISO 527           |

| Tensile Modulus<br>Mechanical Properties | 2.35 GPa<br>Metric        | 341 ksi<br>English        | 50 mm/min; ASTM D638<br>Comments                 |
|------------------------------------------|---------------------------|---------------------------|--------------------------------------------------|
|                                          | 2.35 GPa                  | 341 ksi                   | 1 mm/min; ISO 527                                |
| Flexural Yield Strength                  | 90.0 MPa                  | 13100 psi                 | 1.3 mm/min, 50 mm span; ASTM D790                |
|                                          | 90.0 MPa                  | 13100 psi                 | 2 mm/min; ISO 178                                |
| Flexural Modulus                         | 2.30 GPa                  | 334 ksi                   | 1.3 mm/min, 50 mm span; ASTM D790                |
|                                          | 2.30 GPa                  | 334 ksi                   | 2 mm/min; ISO 178                                |
| Izod Impact, Notched                     | 9.00 J/cm                 | 16.9 ft-lb/in             | ASTM D256                                        |
| Izod Impact, Unnotched                   | NB                        | NB                        | ASTM D4812                                       |
| Izod Impact, Notched (ISO)               | 70.0 kJ/mÂ²               | 33.3 ft-lb/inÂ²           | 80*10*3; ISO 180/1A                              |
|                                          | 12.0 kJ/mÂ²               | 5.71 ft-lb/inÂ²           | 80*10*3; ISO 180/1A                              |
|                                          | @Temperature -30.0<br>Â°C | @Temperature -22.0<br>Â°F |                                                  |
| Izod Impact, Unnotched (ISO)             | NB                        | NB                        | 80*10*3; ISO 180/1U                              |
|                                          | NB                        | NB                        | 80*10*3; ISO 180/1U                              |
|                                          | @Temperature -30.0<br>Â°C | @Temperature -22.0<br>Â°F |                                                  |
| Dart Drop, Total Energy                  | 65.0 J                    | 47.9 ft-lb                | Instrumented Impact Energy @ peak;<br>ASTM D3763 |

| Thermal Properties                             | Metric                           | English                         | Comments                         |
|------------------------------------------------|----------------------------------|---------------------------------|----------------------------------|
| CTE, linear, Parallel to Flow                  | 70.0 Âµm/m-Â°C                   | 38.9 Âµin/in-Â°F                | ASTM E 831                       |
|                                                | @Temperature -40.0 -<br>95.0 Â°C | @Temperature -40.0 -<br>203 Â°F |                                  |
|                                                | 70.0 Âµm/m-Â°C                   | 38.9 Âµin/in-Â°F                | ISO 11359-2                      |
|                                                | @Temperature 23.0 -<br>80.0 Â°C  | @Temperature 73.4 -<br>176 Â°F  |                                  |
| Thermal Conductivity                           | 0.200 W/m-K                      | 1.39 BTU-in/hr-ftÂ²-<br>Â°F     | ASTM C177                        |
|                                                | 0.200 W/m-K                      | 1.39 BTU-in/hr-ftÂ²-<br>Â°F     | ISO 8302                         |
| Deflection Temperature at 0.46 MPa<br>(66 psi) | 138 Â°C                          | 280 Â°F                         | Flatw 80*10*4 sp=64mm; ISO 75/Bf |
|                                                | 138 Â°C                          | 280 Â°F                         | ASTM D648                        |
|                                                | @Thickness 3.20 mm               | @Thickness 0.126 in             |                                  |

| Thermal Properties                          | Metric             | English              | Comments              |
|---------------------------------------------|--------------------|----------------------|-----------------------|
| Deflection Temperature at 1.8 MPa (264 psi) | 127 Â°C            | 261 Â°F              | ASTM D648             |
|                                             | @Thickness 3.20 mm | @Thickness 0.126 in  |                       |
| Vicat Softening Point                       | 144 Â°C            | 291 Â°F              | Rate B/50; ASTM D1525 |
|                                             | 144 Â°C            | 291 Â°F              | Rate B/50; ISO 306    |
| Flammability, UL94                          | V-2                | V-2                  | UL 94                 |
|                                             | @Thickness 1.60 mm | @Thickness 0.0630 in |                       |

| Optical Properties    | Metric             | English             | Comments            |
|-----------------------|--------------------|---------------------|---------------------|
| Refractive Index      | 1.586              | 1.586               | ASTM D542           |
|                       | 1.586              | 1.586               | ISO 489             |
| Haze                  | <= 0.80 %          | <= 0.80 %           | ASTM D1003          |
|                       | @Thickness 2.54 mm | @Thickness 0.100 in |                     |
| Transmission, Visible | 88 - 90 %          | 88 - 90 %           | 2.54 mm; ASTM D1003 |

| Electrical Properties | Metric                | English               | Comments    |
|-----------------------|-----------------------|-----------------------|-------------|
| Volume Resistivity    | >= 1.00e+15 ohm-cm    | >= 1.00e+15 ohm-cm    | ASTM D257   |
|                       | >= 1.00e+15 ohm-cm    | >= 1.00e+15 ohm-cm    | IEC 60093   |
| Dielectric Constant   | 3.0                   | 3.0                   | ASTM D150   |
|                       | @Frequency 60.0 Hz    | @Frequency 60.0 Hz    |             |
|                       | 3.0                   | 3.0                   | ASTM D150   |
|                       | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz |             |
|                       | 3.0                   | 3.0                   | IEC 60250   |
|                       | @Frequency 60.0 Hz    | @Frequency 60.0 Hz    |             |
|                       | 3.0                   | 3.0                   | IEC 60250   |
|                       | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz |             |
| Dielectric Strength   | 27.0 kV/mm            | 686 kV/in             | ASTM D149   |
|                       | @Thickness 1.60 mm    | @Thickness 0.0630 in  |             |
|                       | 27.0 kV/mm            | 686 kV/in             | IEC 60243-1 |
|                       | @Thickness 1.60 mm    | @Thickness 0.0630 in  |             |

| Electrical Properties | Metric                | English               | Comments  |
|-----------------------|-----------------------|-----------------------|-----------|
| Dissipation Factor    | @Frequency 60.0 Hz    | @Frequency 60.0 Hz    | ASTM D150 |
|                       | 0.0010                | 0.0010                | IEC 60250 |
|                       | @Frequency 60.0 Hz    | @Frequency 60.0 Hz    |           |
|                       | 0.010                 | 0.010                 | IEC 60250 |
|                       | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz |           |
|                       | 0.010                 | 0.010                 | ASTM D150 |
|                       | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz |           |

| Descriptive Properties              | Value  | Comments       |
|-------------------------------------|--------|----------------|
| Ball Pressure Test, 125Å°C +/- 2Å°C | Passes | IEC 60695-10-2 |

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