

## Technical Data Sheet

### *Diamond* PC 1029 PG BKBLK



Polycarbonate

#### Product Description

*Diamond* PC 1029 PG BKBLK is a Polycarbonate material. Features include: Food Contact Acceptable.

|            |                         |
|------------|-------------------------|
| Attribute  | Food Contact Acceptable |
| Appearance | Natural Color           |

| Typical Properties                                                    | Nominal Value | Units    | Test Method |
|-----------------------------------------------------------------------|---------------|----------|-------------|
| <b>Physical</b>                                                       |               |          |             |
| Melt Flow Rate, (300 °C/1.2 kg, Procedure A)                          | 20            | g/10 min | ASTM D1238  |
| Density - Specific Gravity                                            | 1.2           | g/cm³    | ASTM D792   |
| <b>Mechanical</b>                                                     |               |          |             |
| Tensile Strength at Yield, (51 mm/min)                                | 62.1          | MPa      | ASTM D638   |
| Flexural Modulus, (1.3 mm/min, Procedure B, Method I (3 point load))  | 2380          | MPa      | ASTM D790   |
| Flexural Strength, (1.3 mm/min, Method I (3 point load), Procedure B) | 89.6          | MPa      | ASTM D790   |
| <b>Impact</b>                                                         |               |          |             |
| Notched Izod Impact, (3.18 mm, Method A)                              | 640           | J/m      | ASTM D256   |
| <b>Hardness</b>                                                       |               |          |             |
| Rockwell Hardness, (R-Scale)                                          | 120           |          | ASTM D785   |
| <b>Thermal</b>                                                        |               |          |             |
| Deflection Temperature Under Load Unannealed (264 psi), (3.18 mm)     | 127           | °C       | ASTM D648   |
| <b>Additional Information</b>                                         |               |          |             |
| Water Absorption at 24 hrs, (23 °C)                                   | 0.15          | %        | ASTM D570   |
| <b>UL Information</b>                                                 |               |          |             |
| Flame Rating, (1.5 mm)                                                | V-2           |          | UL 94       |
| UL File Number                                                        | E150937       |          |             |

| Injection Parameters           | Nominal Value  | Units |
|--------------------------------|----------------|-------|
| Drying Time, (Desiccant Dryer) | 3.0 to 4.0     | hr    |
| Drying Temperature             | 120            | °C    |
| Suggested Max Moisture         | 0.02           | %     |
| Nozzle Temperature             | 270 to 300     | °C    |
| Screw Speed                    | 40 to 70       | rpm   |
| Processing (Melt) Temp         | 280 to 305     | °C    |
| Front Temperature              | 280 to 305     | °C    |
| Suggested Shot Size            | 40 to 60       | %     |
| Middle Temperature             | 270 to 295     | °C    |
| Vent Depth                     | 0.025 to 0.076 | mm    |
| Rear Temperature               | 260 to 280     | °C    |
| Back Pressure                  | 0.300 to 0.700 | MPa   |
| Mold Temperature               | 80 to 100      | °C    |