

# PRL PC-FD4-(color)-1

Polycarbonate

Polymer Resources Ltd.

## Message:

PRL PC-FD4-(color)-1 is a Polycarbonate (PC) product. It can be processed by injection molding and is available in North America. Typical application: Food Contact Applications.

Characteristics include:

RoHS Compliant

Good Mold Release

Mold Release Agent

| General Information                      |                                      |          |             |
|------------------------------------------|--------------------------------------|----------|-------------|
| Additive                                 | Mold Release                         |          |             |
| Features                                 | Good Flow                            |          |             |
|                                          | Good Mold Release                    |          |             |
| Agency Ratings                           | FDA Food Contact, Unspecified Rating |          |             |
| RoHS Compliance                          | RoHS Compliant                       |          |             |
| Forms                                    | Pellets                              |          |             |
| Processing Method                        | Injection Molding                    |          |             |
| Physical                                 | Nominal Value                        | Unit     | Test Method |
| Specific Gravity                         | 1.20                                 | g/cm³    | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (300°C/1.2 kg) | 20 to 30                             | g/10 min | ASTM D1238  |
| Molding Shrinkage                        |                                      |          | ASTM D955   |
| Flow : 3.18 mm                           | 0.50 to 0.70                         | %        |             |
| Across Flow : 3.18 mm                    | 0.50 to 0.70                         | %        |             |
| Hardness                                 | Nominal Value                        | Unit     | Test Method |
| Rockwell Hardness                        |                                      |          | ASTM D785   |
| M-Scale                                  | 70                                   |          |             |
| R-Scale                                  | 118                                  |          |             |
| Mechanical                               | Nominal Value                        | Unit     | Test Method |
| Tensile Strength                         |                                      |          | ASTM D638   |
| Yield, 3.18 mm                           | 62.1                                 | MPa      |             |
| Break, 3.18 mm                           | 65.5                                 | MPa      |             |
| Tensile Elongation                       |                                      |          | ASTM D638   |
| Yield, 3.18 mm                           | 6.0                                  | %        |             |
| Break, 3.18 mm                           | 120                                  | %        |             |
| Flexural Modulus (3.18 mm)               | 2280                                 | MPa      | ASTM D790   |
| Flexural Strength (3.18 mm)              | 92.4                                 | MPa      | ASTM D790   |
| Impact                                   | Nominal Value                        | Unit     | Test Method |
| Notched Izod Impact (23°C, 3.18 mm)      | 640                                  | J/m      | ASTM D256   |
| Gardner Impact (3.18 mm)                 | > 36.2                               | J        | ASTM D3029  |

| Thermal                           | Nominal Value | Unit | Test Method             |
|-----------------------------------|---------------|------|-------------------------|
| Deflection Temperature Under Load |               |      | ASTM D648               |
| 0.45 MPa, Unannealed, 3.18 mm     | 129           | °C   |                         |
| 1.8 MPa, Unannealed, 3.18 mm      | 124           | °C   |                         |
| Vicat Softening Temperature       | 141           | °C   | ASTM D1525 <sup>1</sup> |
| Optical                           | Nominal Value | Unit | Test Method             |
| Transmittance (2540 μm)           | 88.0          | %    | ASTM D1003              |
| Haze (2540 μm)                    | 1.0           | %    | ASTM D1003              |
| Injection                         | Nominal Value | Unit |                         |
| Drying Temperature                | 118 to 124    | °C   |                         |
| Drying Time                       | 3.0 to 4.0    | hr   |                         |
| Drying Time, Maximum              | 8.0           | hr   |                         |
| Rear Temperature                  | 249 to 271    | °C   |                         |
| Middle Temperature                | 260 to 282    | °C   |                         |
| Front Temperature                 | 271 to 293    | °C   |                         |
| Processing (Melt) Temp            | 266 to 293    | °C   |                         |
| Mold Temperature                  | 65.6 to 93.3  | °C   |                         |
| NOTE                              |               |      |                         |

1. Rate B (120°C/h), Loading 2 (50 N)

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