

## Nylene® 51WF40

Polymeric Resources Corporation (PRC) - Polyamide 66

### General Information

#### Product Description

40% Mineral Reinforced, Nylon 6/6 Performance Compound

#### General

|                        |   |
|------------------------|---|
| Material Status        | <ul style="list-style-type: none"> <li>Commercial: Active</li> </ul>            |
| Availability           | <ul style="list-style-type: none"> <li>North America</li> </ul>                 |
| Filler / Reinforcement | <ul style="list-style-type: none"> <li>Mineral, 40% Filler by Weight</li> </ul> |
| Appearance             | <ul style="list-style-type: none"> <li>Natural Color</li> </ul>                 |
| Forms                  | <ul style="list-style-type: none"> <li>Pellets</li> </ul>                       |
| Processing Method      | <ul style="list-style-type: none"> <li>Injection Molding</li> </ul>             |

### Properties <sup>1</sup>

| Physical  | Nominal Value    | Unit     | Test Method |
|---|------------------|----------|-------------|
| Density / Specific Gravity  | 1.50             |          | ASTM D792   |
| Molding Shrinkage - Flow  | 1.0E-3 to 5.0E-3 | in/in    |             |
| Molding Shrinkage - Across Flow                                   | 3.0E-3 to 9.0E-3 | in/in    |             |
| Mechanical  | Nominal Value    | Unit     | Test Method |
| Tensile Strength (Yield, 73°F)                                    | 13800            | psi      | ASTM D638   |
| Tensile Elongation (Break)  | 3.0              | %        | ASTM D638   |
| Flexural Modulus  | 1.25E+6          | psi      | ASTM D790   |
| Flexural Strength   | 11500            | psi      | ASTM D790   |
| Impact  | Nominal Value    | Unit     | Test Method |
| Notched Izod Impact (73°F, 0.125 in)                              | 0.60             | ft·lb/in | ASTM D256   |
| Thermal   | Nominal Value    | Unit     | Test Method |
| Deflection Temperature Under Load (66 psi, Unannealed, 0.125 in)  | 469              | °F       | ASTM D648   |
| Deflection Temperature Under Load (264 psi, Unannealed, 0.125 in) | 399              | °F       | ASTM D648   |
| Flammability  | Nominal Value    | Unit     | Test Method |
| Flame Rating (0.12 in)  | HB               |          | UL 94       |

### Processing Information

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | 180           | °F   |
| Drying Time            | 2.0 to 4.0    | hr   |
| Suggested Max Moisture | 2.0E-3        | %    |
| Rear Temperature       | 460 to 520    | °F   |
| Middle Temperature     | 480 to 520    | °F   |
| Front Temperature      | 480 to 520    | °F   |
| Nozzle Temperature     | 480 to 559    | °F   |
| Processing (Melt) Temp | 480 to 540    | °F   |
| Mold Temperature       | 81 to 160     | °F   |
| Back Pressure          | 50.0 to 100   | psi  |

