

## Nylene® 51GR35HS

Polymeric Resources Corporation (PRC) - *Polyamide 66*

### General Information

#### Product Description

35% Glass Reinforced, Heat Stabilized, Nylon 6/6

#### General

|                        |                                     |
|------------------------|-------------------------------------|
| Material Status        | • Commercial: Active                |
| Availability           | • North America                     |
| Filler / Reinforcement | • Glass Fiber, 35% Filler by Weight |
| Additive               | • Heat Stabilizer                   |
| Features               | • Heat Stabilized                   |
| Appearance             | • Natural Color                     |
| Forms                  | • Pellets                           |
| Processing Method      | • Injection Molding                 |

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

| Physical                                                          | Nominal Value | Unit     | Test Method |
|-------------------------------------------------------------------|---------------|----------|-------------|
| Density / Specific Gravity                                        | 1.40          |          | ASTM D792   |
| Mechanical                                                        | Nominal Value | Unit     | Test Method |
| Tensile Strength (Yield, 73°F)                                    | 26000         | psi      | ASTM D638   |
| Tensile Elongation (Break)                                        | 3.0           | %        | ASTM D638   |
| Flexural Modulus                                                  | 1.20E+6       | psi      | ASTM D790   |
| Flexural Strength                                                 | 40000         | psi      | ASTM D790   |
| Impact                                                            | Nominal Value | Unit     | Test Method |
| Notched Izod Impact (73°F, 0.125 in)                              | 1.8           | ft·lb/in | ASTM D256   |
| Thermal                                                           | Nominal Value | Unit     | Test Method |
| Deflection Temperature Under Load (66 psi, Unannealed, 0.125 in)  | 480           | °F       | ASTM D648   |
| Deflection Temperature Under Load (264 psi, Unannealed, 0.125 in) | 500           | °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       | 480 to 540    | °F   |
| Middle Temperature     | 520 to 559    | °F   |
| Front Temperature      | 520 to 559    | °F   |
| Nozzle Temperature     | 520 to 559    | °F   |
| Processing (Melt) Temp | 520 to 540    | °F   |
| Mold Temperature       | 81 to 160     | °F   |
| Back Pressure          | 50.0 to 100   | psi  |

