

# Chemlon® 66GF35

Polyamide 66

Teknor Apex Company (Chem Polymer)

Message:

66GF35 is a 35% glass fibre reinforced nylon 66 that offers increased mechanical performance for use in applications that require additional stiffness and strength.

| General Information                             |            |   |                   |                 |
|---|------------|---|-------------------|-----------------|
| Filler / Reinforcement                          |            | Glass fiber reinforced material, 35% filler by weight |                   |                 |
| Processing Method                               |            | Injection molding                                     |                   |                 |
| Physical  | Dry        | Conditioned   | Unit              | Test Method     |
| Density   | 1.41       | --  | g/cm <sup>3</sup> | ISO 1183        |
| Molding Shrinkage <sup>1</sup>                  | 0.30 - 1.2 | --  | %                 | Internal method |
| Water Absorption<br>(Equilibrium, 23°C, 50% RH) | 1.6        | --  | %                 | ISO 62          |
| Mechanical                                      | Dry        | Conditioned   | Unit              | Test Method     |
| Tensile Modulus                                 | 9000       | 6500  | MPa               | ISO 527-2       |
| Tensile Stress                                  | 160        | 120   | MPa               | ISO 527-2       |
| Tensile Strain (Break)                          | 4.0        | 8.0   | %                 | ISO 527-2       |
| Flexural Modulus                                | 8000       | 5000  | MPa               | ISO 178         |
| Flexural Stress                                 | 235        | 125   | MPa               | ISO 178         |
| Impact  | Dry        | Conditioned   | Unit              | Test Method     |
| Notched Izod Impact                             | 7.5        | 18  | kJ/m <sup>2</sup> | ISO 180/A       |
| Thermal   | Dry        | Conditioned   | Unit              | Test Method     |
| Heat Deflection Temperature                     |            |   |                   |                 |
| 0.45 MPa, not annealed                          | > 245      | --  | °C                | ISO 75-2/B      |
| 1.8 MPa, not annealed                           | 245        | --  | °C                | ISO 75-2/A      |
| Electrical                                      | Dry        | Conditioned   | Unit              | Test Method     |
| Surface Resistivity                             | 1.0E+14    | 1.0E+11   | ohms              | IEC 60093       |
| Volume Resistivity                              | 1.0E+16    | 1.0E+13   | ohms·cm           | IEC 60093       |
| Dielectric Strength (3.00 mm)                   | 16         | --  | kV/mm             | IEC 60243-1     |
| Comparative Tracking Index                      | 600        | --  | V                 | IEC 60112       |
| Flammability                                    | Dry        | Conditioned   | Unit              | Test Method     |
| Flame Rating (1.50 mm, Teknor Apex test result) | HB         | --  |                   | UL 94           |
| Injection                                       | Dry        | Unit  |                   |                 |
| Drying Temperature                              | 80.0       |   | °C                |                 |
| Drying Time                                     | 2.0        |   | hr                |                 |
| Rear Temperature                                | 275 - 295  |   | °C                |                 |

|                        |             |    |
|------------------------|-------------|----|
| Middle Temperature     | 275 - 295   | °C |
| Front Temperature      | 275 - 295   | °C |
| Processing (Melt) Temp | 280 - 295   | °C |
| Mold Temperature       | 80.0 - 90.0 | °C |
| Injection Rate         | Fast        |    |
| Back Pressure          | Low         |    |
| Screw Speed            | Moderate    |    |

#### Injection instructions

No drying is necessary unless the material has been exposed to air for longer than three hours. The appearance of splash marks on the surface of mouldings indicates excessive moisture is present.

#### NOTE

1. Mould shrinkage is significantly influenced by many factors including wall thickness, gating, moulding shape and processing conditions. The range values given are determined from specimen bar mouldings of 1.5mm to 4mm wall thickness. They are provided as a guide for comparison purposes only and no guarantee should be inferred from their inclusion. (Specimens measured in the dry state, 24 hours after moulding).

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