

# TUFNYL® SGF 45 GREY

Polyamide 6

SRF Ltd.

Message:

Polyamide 6, 15% Glass fiber reinforced, grey pigmented material for general purpose injection molding

| General Information            |                                  |                   |                 |
|--------------------------------|----------------------------------|-------------------|-----------------|
| Filler / Reinforcement         | Glass Fiber,15% Filler by Weight |                   |                 |
| Features                       | General Purpose                  |                   |                 |
| Uses                           | General Purpose                  |                   |                 |
| Appearance                     | Grey                             |                   |                 |
| Processing Method              | Injection Molding                |                   |                 |
| Physical                       | Nominal Value                    | Unit              | Test Method     |
| Specific Gravity               | 1.50                             | g/cm <sup>3</sup> | ASTM D792       |
| Molding Shrinkage - Flow       | 0.10 to 0.25                     | %                 | Internal Method |
| Water Absorption (Equilibrium) | 0.40                             | %                 | ASTM D570       |
| Hardness                       | Nominal Value                    | Unit              | Test Method     |
| Rockwell Hardness              |                                  |                   | ASTM D785       |
| M-Scale                        | 95                               |                   |                 |
| R-Scale                        | 125                              |                   |                 |
| Mechanical                     | Nominal Value                    | Unit              | Test Method     |
| Tensile Stress (Yield)         | 180                              | MPa               | ISO 527-2       |
| Tensile Strain (Break)         | 3.0                              | %                 | ISO 527-2       |
| Flexural Modulus               | 10000                            | MPa               | ISO 178         |
| Flexural Stress                | 285                              | MPa               | ISO 178         |
| Impact                         | Nominal Value                    | Unit              | Test Method     |
| Charpy Notched Impact Strength | 98.1                             | J/m               | ISO 180         |
| Thermal                        | Nominal Value                    | Unit              | Test Method     |
| Heat Deflection Temperature    |                                  |                   |                 |
| 0.45 MPa, Unannealed           | > 210                            | °C                | ISO 75-2/B      |
| 1.8 MPa, Unannealed            | > 210                            | °C                | ISO 75-2/A      |
| Melting Temperature            | 220                              | °C                | DSC             |
| Electrical                     | Nominal Value                    | Unit              | Test Method     |
| Surface Resistivity            | 1.0E+14                          | ohms              | ASTM D257       |
| Volume Resistivity             | 1.0E+15                          | ohms · cm         | ASTM D257       |
| Dielectric Strength            | 24                               | kV/mm             | ASTM D149       |
| Injection                      | Nominal Value                    | Unit              |                 |
| Drying Temperature             | 80.0                             | °C                |                 |
| Drying Time                    | 2.0 to 4.0                       | hr                |                 |
| Suggested Max Moisture         | < 0.20                           | %                 |                 |

|                        |              |     |
|------------------------|--------------|-----|
| Processing (Melt) Temp | 280 to 300   | °C  |
| Mold Temperature       | 40.0 to 80.0 | °C  |
| Injection Pressure     | 3.50 to 12.5 | MPa |
| Injection Rate         | Fast         |     |

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