# SLOVALEN® PC 51 GF 10

#### Polypropylene

Plastcom

#### Message:

Modified copolymer PP for injection moulding, chemically reinforced with 10% glass fibre, with high strength, rigidity and toughness, adapted thermal properties, decreased shrinkage. Suitable for automotive, engineering, electrical and consumer goods industry. With the increasing content of GF also the toughness, tensile and bending strength, modulus in tension and bending increase and the shrinkage decreases as well as the heat application increases up to 150°C. Additional drying of the material is not necessary. Delivered in natural mode and in the full RAL colour scale.

| General Information                       |                                    |          |             |  |  |
|---|------------------------------------|----------|-------------|--|--|
| Filler / Reinforcement                    | Glass Fiber,10% Filler by Weight   |          |             |  |  |
| Features                                  | Chemically Coupled                 |          |             |  |  |
|   | Copolymer                          |          |             |  |  |
|   | High Rigidity                      |          |             |  |  |
|   | High Strength                      |          |             |  |  |
|   | Ultra High Toughness               |          |             |  |  |
| Uses                                      | Automotive Applications            |          |             |  |  |
|   | Consumer Applications              |          |             |  |  |
|   | Electrical/Electronic Applications |          |             |  |  |
|   | Engineering Parts                  |          |             |  |  |
| Appearance                                | Colors Available                   |          |             |  |  |
|   | Natural Color                      |          |             |  |  |
| Processing Method                         | Injection Molding                  |          |             |  |  |
| Resin ID (ISO 1043)                       | PP                                 |          |             |  |  |
| Physical                                  | Nominal Value                      | Unit     | Test Method |  |  |
| Density                                   | 1.03                               | g/cm³    | ISO 1183    |  |  |
| Melt Mass-Flow Rate (MFR) (230°C/2.16 kg) | 5.0                                | g/10 min | ISO 1133    |  |  |
| Molding Shrinkage                         |                                    |          | STM 64 0808 |  |  |
| Across Flow                               | 1.9                                | %        |             |  |  |
| Flow                                      | 2.0                                | %        |             |  |  |
| Mechanical                                | Nominal Value                      | Unit     | Test Method |  |  |
| Tensile Modulus                           | 3100                               | MPa      | ISO 527-2   |  |  |
| Tensile Stress (Yield)                    | 35.0                               | MPa      | ISO 527-2   |  |  |
| Tensile Strain (Yield)                    | 4.0                                | %        | ISO 527-2   |  |  |
| Flexural Modulus                          | 2000                               | MPa      | ISO 178     |  |  |
| Flexural Stress                           | 55.0                               | MPa      | ISO 178     |  |  |
| Impact                                    | Nominal Value                      | Unit     | Test Method |  |  |

| Heat Deflection Temperature (0.45 MPa, Unannealed) 110 °C ISO 75-2/B Vicat Softening Temperature 130 °C ISO 306/B Melting Temperature (DSC) 160 °C ISO 3146 Injection Nominal Value Unit Processing (Melt) Temp 200 to 250 °C   |  |               |       |             |
|---|--|---------------|-------|-------------|
| 23°C       15       kJ/m²         Charpy Unnotched Impact Strength       ISO 179         -20°C       25       kJ/m²         23°C       48       kJ/m²         Thermal       Nominal Value       Unit       Test Metho         Heat Deflection Temperature (0.45 MPa, Unannealed)       110       °C       ISO 75-2/B         Vicat Softening Temperature       130       °C       ISO 306/B         Melting Temperature (DSC)       160       °C       ISO 3146         Injection       Nominal Value       Unit         Processing (Melt) Temp       200 to 250       °C | Charpy Notched Impact Strength         |               |       | ISO 179     |
| Charpy Unnotched Impact Strength  -20°C  25  kJ/m²  23°C  48  kJ/m²  Thermal  Nominal Value  Unit  Test Method  Heat Deflection Temperature (0.45 MPa, Unannealed)  110  °C  ISO 75-2/B  Vicat Softening Temperature  130  °C  ISO 306/B  Melting Temperature (DSC)  160  °C  ISO 3146  Injection  Nominal Value  Unit  Processing (Melt) Temp  200 to 250  °C  | -20°C                                  | 1.0           | kJ/m² |             |
| -20°C 23°C 48 kJ/m²  Thermal Nominal Value Unit Test Methor Heat Deflection Temperature (0.45 MPa, Unannealed) 110 °C ISO 75-2/B Vicat Softening Temperature 130 °C ISO 306/B Melting Temperature (DSC) 160 °C ISO 3146  Injection Nominal Value Unit  Processing (Melt) Temp 200 to 250 °C   | 23°C                                   | 15            | kJ/m² |             |
| 23°C  | Charpy Unnotched Impact Strength       |               |       | ISO 179     |
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| Unannealed)110°CISO 75-2/BVicat Softening Temperature130°CISO 306/BMelting Temperature (DSC)160°CISO 3146InjectionNominal ValueUnitProcessing (Melt) Temp200 to 250°C   | Thermal                                | Nominal Value | Unit  | Test Method |
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| Melting Temperature (DSC)160°CISO 3146InjectionNominal ValueUnitProcessing (Melt) Temp200 to 250°C  | Unannealed)                            | 110           | °C    | ISO 75-2/B  |
| Injection Nominal Value Unit Processing (Melt) Temp 200 to 250 °C   | Vicat Softening Temperature            | 130           | °C    | ISO 306/B   |
| Processing (Melt) Temp 200 to 250 °C  | Melting Temperature (DSC)              | 160           | °C    | ISO 3146    |
| -   | Injection                              | Nominal Value | Unit  |             |
| Mald Tarran and the CO O  | Processing (Melt) Temp                 | 200 to 250    | °C    |             |
| Mola remperature 40.0 to 60.0 °C  | Mold Temperature                       | 40.0 to 60.0  | °C    |             |
| Injection Pressure 70.0 to 120 MPa  | Injection Pressure                     | 70.0 to 120   | MPa   |             |

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