

Terluran® GP-22 is an easy-flow, general purpose injection molding grade with high resistance to impact and heat distortion; intended for a wide range of applications, particularly in the housings sector.

| Rheological properties     | Value | Unit                   | Test Standard |
|----------------------------|-------|------------------------|---------------|
| <b>ISO Data</b>            |       |                        |               |
| Melt volume-flow rate, MVR | 19    | cm <sup>3</sup> /10min | ISO 1133      |
| Temperature                | 220   | °C                     | -             |
| Load                       | 10    | kg                     | -             |

| Mechanical Properties                   | Value | Unit              | Test Standard |
|-----------------------------------------|-------|-------------------|---------------|
| <b>ISO Data</b>                         |       |                   |               |
| Tensile Modulus                         | 2300  | MPa               | ISO 527       |
| Yield stress                            | 45    | MPa               | ISO 527       |
| Yield strain                            | 2.6   | %                 | ISO 527       |
| Nominal strain at break                 | 10    | %                 | ISO 527       |
| Impact Strength (Charpy), +23°C         | 180   | kJ/m <sup>2</sup> | ISO 179/1eU   |
| Impact Strength (Charpy), -30°C         | 100   | kJ/m <sup>2</sup> | ISO 179/1eU   |
| Notched Impact Strength (Charpy), +23°C | 22    | kJ/m <sup>2</sup> | ISO 179/1eA   |
| Notched Impact Strength (Charpy), -30°C | 8     | kJ/m <sup>2</sup> | ISO 179/1eA   |

| Thermal Properties                        | Value | Unit  | Test Standard |
|-------------------------------------------|-------|-------|---------------|
| <b>ISO Data</b>                           |       |       |               |
| Temp. of deflection under load (1.80 MPa) | 94    | °C    | ISO 75-1/-2   |
| Temp. of deflection under load (0.45 MPa) | 99    | °C    | ISO 75-1/-2   |
| Vicat softening temperature, 50°C/h 50N   | 96    | °C    | ISO 306       |
| Burning Behav. at 1.5 mm Nom. Thickn.     | HB    | class | UL 94         |
| Thickness tested                          | 1.5   | mm    | -             |
| UL recognition                            | yes   | -     | -             |
| Burning Behav. at thickness h             | HB    | class | UL 94         |
| Thickness tested                          | 3.0   | mm    | -             |
| UL recognition                            | yes   | -     | -             |

| Electrical Properties        | Value | Unit  | Test Standard |
|------------------------------|-------|-------|---------------|
| <b>ISO Data</b>              |       |       |               |
| Relative permittivity, 100Hz | 2.9   | -     | IEC 62631-2-1 |
| Relative permittivity, 1MHz  | 2.8   | -     | IEC 62631-2-1 |
| Dissipation Factor, 100Hz    | 48    | E-4   | IEC 62631-2-1 |
| Dissipation Factor, 1MHz     | 79    | E-4   | IEC 62631-2-1 |
| Volume Resistivity           | >1E13 | Ohm*m | IEC 62631-3-1 |
| Surface Resistivity          | 1E13  | Ohm   | IEC 62631-3-2 |

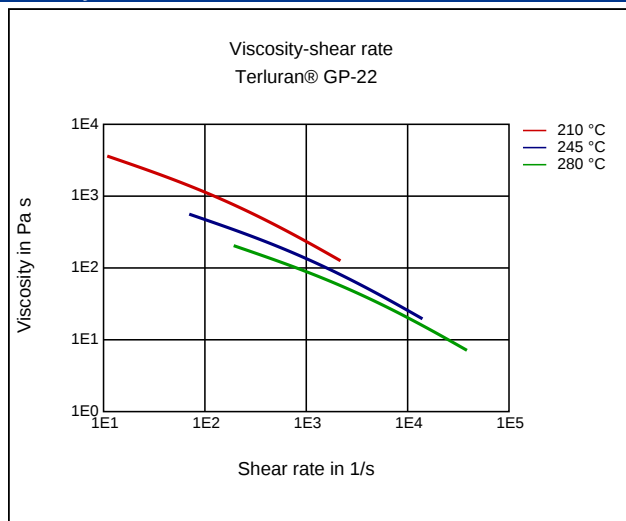
| Other Properties    | Value | Unit              | Test Standard  |
|---------------------|-------|-------------------|----------------|
| <b>ISO Data</b>     |       |                   |                |
| Water Absorption    | 1     | %                 | Sim. to ISO 62 |
| Humidity absorption | 0.22  | %                 | Sim. to ISO 62 |
| Density             | 1040  | kg/m <sup>3</sup> | ISO 1183       |

| Rheological calculation properties | Value | Unit              | Test Standard |
|------------------------------------|-------|-------------------|---------------|
| <b>ISO Data</b>                    |       |                   |               |
| Density of melt                    | 927   | kg/m <sup>3</sup> | -             |
| Thermal Conductivity of Melt       | 0.202 | W/(m K)           | -             |
| Spec. heat capacity of melt        | 2570  | J/(kg K)          | -             |
| Ejection temperature               | 91    | °C                | -             |

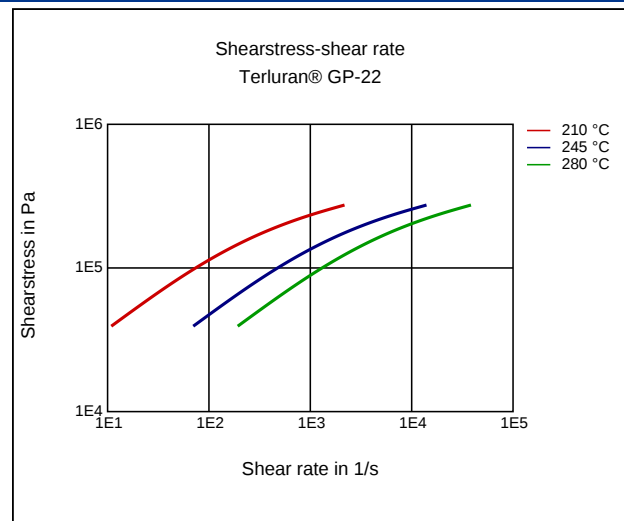
| Processing Recommendation Injection Molding | Value     | Unit | Test Standard |
|---------------------------------------------|-----------|------|---------------|
| Pre-drying - Temperature                    | 80        | °C   | -             |
| Pre-drying - Time                           | 2 - 4     | h    | -             |
| Melt temperature                            | 220 - 260 | °C   | -             |
| Mold temperature                            | 30 - 60   | °C   | -             |

Diagrams

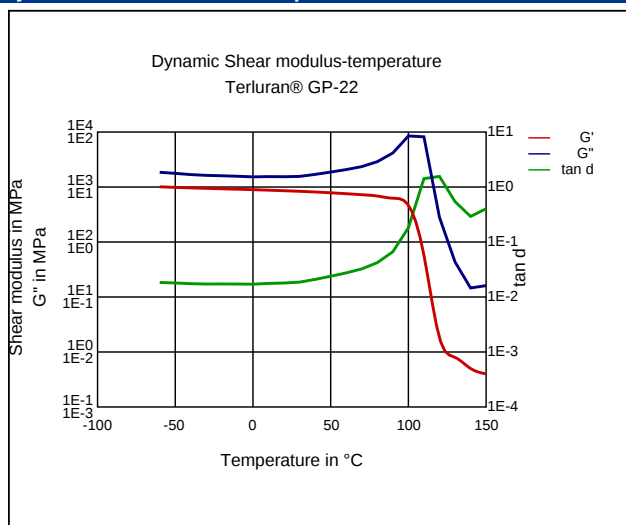
Viscosity-shear rate



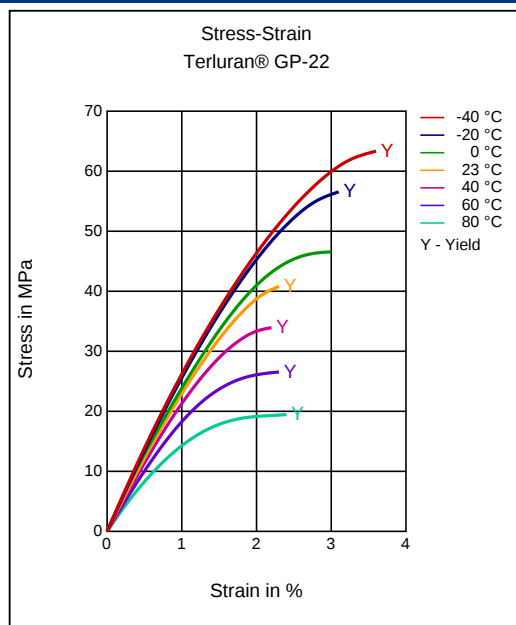
Shearstress-shear rate



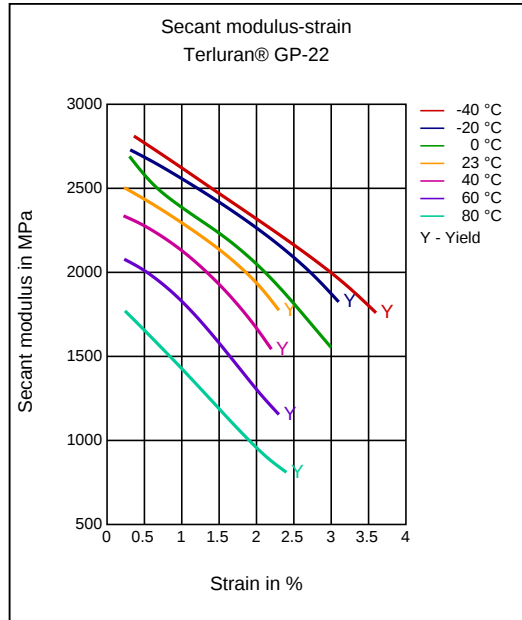
Dynamic Shear modulus-temperature



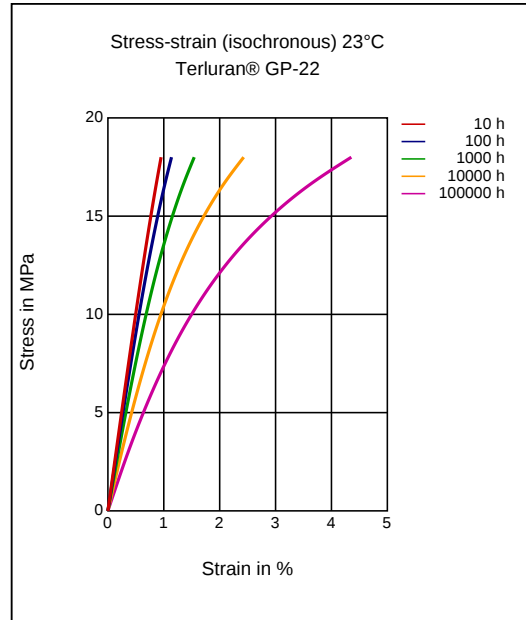
Stress-strain



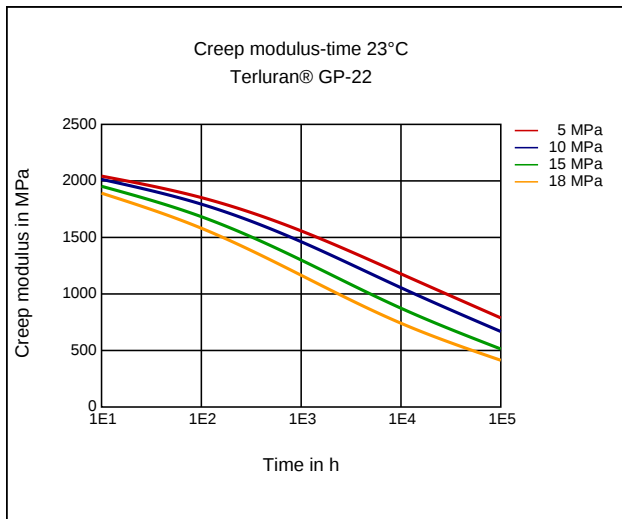
**Secant modulus-strain**



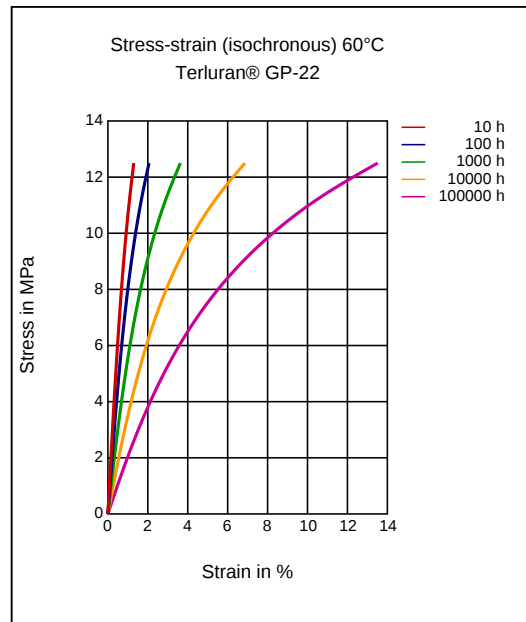
**Stress-strain (isochronous) 23 °C**



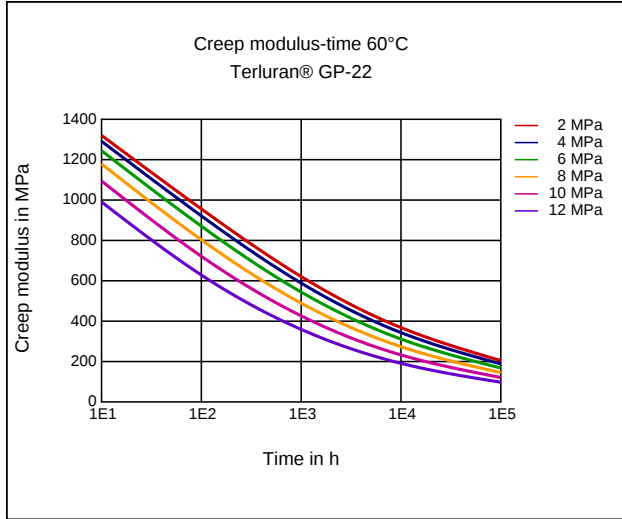
**Creep modulus-time 23 °C**



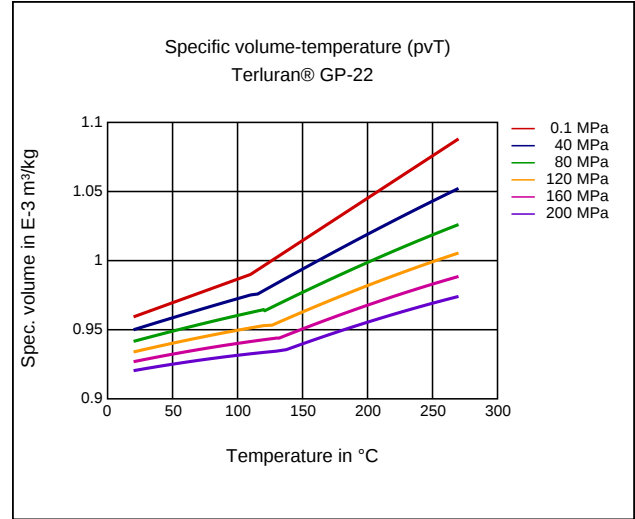
**Stress-strain (isochronous) 60 °C**



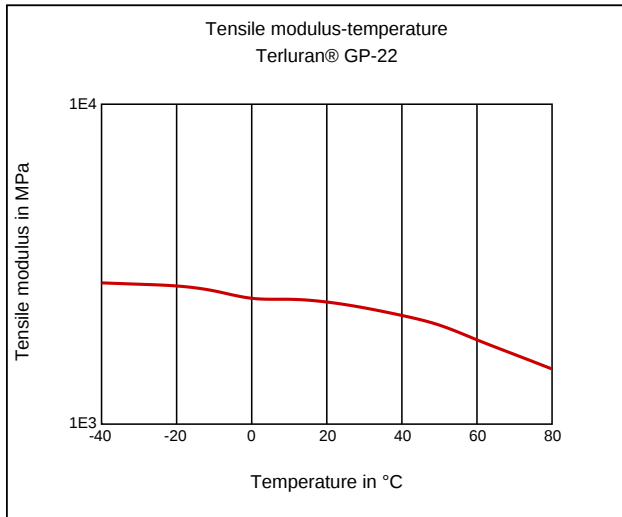
**Creep modulus-time 60°C**



**Specific volume-temperature (pvT)**



**Tensile Modulus-Temperature**



**Characteristics**

**Processing**

Injection Molding

**Delivery form**

Pellets

**Injection Molding**

**PREPROCESSING**

Pre-drying, Temperature: 80°C

Pre-drying, Time: 2 - 4h

**PROCESSING**

Melt temperature, range: 220 - 260°C

Mold temperature, range: 30 - 80°C

**Special Characteristics**

Platable, Impact modified, Heat aging stabilized

**Disclaimer**

**Liability Exclusion**

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