

**Ultramid® T7300EG10 LS BK23346**  
**PA\*-GF50**

BASF

Glass-fiber reinforced, heat aging resistant injection molding grade with excellent surface quality based on semi-crystalline polyamides with partially aromatic content. The product can be characterized as compound with very high strength and stiffness even after moisture uptake.

**Markets & applications**

Automotive: structural parts, metal replacement, brake parts, interior, powertrain

E&E: electrical appliances, cell phones

Consumer goods: home appliances, consumer electronics, furniture fittings

| Rheological properties      | dry / cond | Unit      | Test Standard   |
|-----------------------------|------------|-----------|-----------------|
| <b>ISO Data</b>             |            |           |                 |
| Melt volume-flow rate, MVR  | 7 / *      | cm³/10min | ISO 1133        |
| Temperature                 | 275 / *    | °C        | -               |
| Load                        | 5 / *      | kg        | -               |
| Molding shrinkage, parallel | 0.5 / *    | %         | ISO 294-4, 2577 |
| Molding shrinkage, normal   | 0.7 / *    | %         | ISO 294-4, 2577 |

| Mechanical Properties                   | dry / cond    | Unit  | Test Standard |
|-----------------------------------------|---------------|-------|---------------|
| <b>ISO Data</b>                         |               |       |               |
| Tensile Modulus                         | 17700 / 16600 | MPa   | ISO 527       |
| Stress at Break                         | 255 / 210     | MPa   | ISO 527       |
| Strain at Break                         | 2.8 / 3       | %     | ISO 527       |
| Impact Strength (Charpy), +23°C         | 108 / 100     | kJ/m² | ISO 179/1eU   |
| Impact Strength (Charpy), -30°C         | 90 / 88       | kJ/m² | ISO 179/1eU   |
| Notched Impact Strength (Charpy), +23°C | 15 / 15       | kJ/m² | ISO 179/1eA   |
| Notched Impact Strength (Charpy), -30°C | 14 / 14       | kJ/m² | ISO 179/1eA   |

| Thermal Properties                        | dry / cond | Unit | Test Standard  |
|-------------------------------------------|------------|------|----------------|
| <b>ISO Data</b>                           |            |      |                |
| Melting Temperature (10°C/min)            | 255 / *    | °C   | ISO 11357-1/-3 |
| Temp. of deflection under load (1.80 MPa) | 240 / *    | °C   | ISO 75-1/-2    |
| Temp. of deflection under load (0.45 MPa) | 255 / *    | °C   | ISO 75-1/-2    |

| Other Properties    | dry / cond | Unit  | Test Standard  |
|---------------------|------------|-------|----------------|
| <b>ISO Data</b>     |            |       |                |
| Humidity absorption | 1.2 / *    | %     | Sim. to ISO 62 |
| Density             | 1600 / -   | kg/m³ | ISO 1183       |

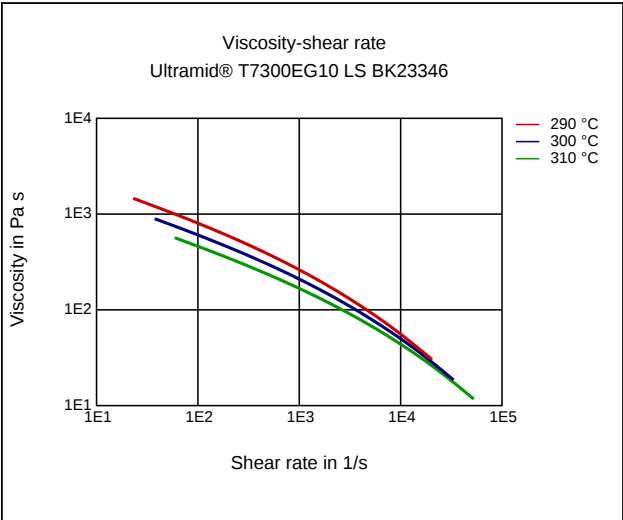
| Material Specific Properties | dry / cond | Unit  | Test Standard       |
|------------------------------|------------|-------|---------------------|
| <b>ISO Data</b>              |            |       |                     |
| Viscosity number             | 134 / *    | cm³/g | ISO 307, 1157, 1628 |

| Test specimen production              | Value | Unit | Test Standard |
|---------------------------------------|-------|------|---------------|
| <b>ISO Data</b>                       |       |      |               |
| Injection Molding, melt temperature   | 310   | °C   | ISO 294       |
| Injection Molding, mold temperature   | 100   | °C   | ISO 294       |
| Injection Molding, injection velocity | 200   | mm/s | ISO 294       |

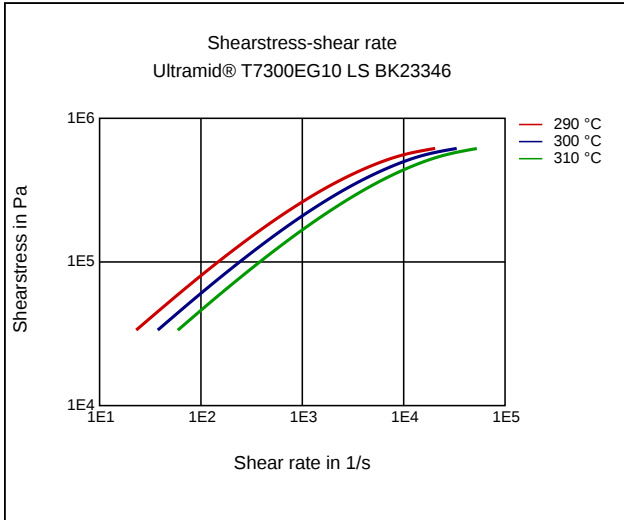
| Processing Recommendation Injection Molding | Value     | Unit | Test Standard |
|---------------------------------------------|-----------|------|---------------|
| Pre-drying - Temperature                    | 110       | °C   | -             |
| Pre-drying - Time                           | 8         | h    | -             |
| Processing humidity                         | ≤0.15     | %    | -             |
| Melt temperature                            | 300 - 320 | °C   | -             |
| Mold temperature                            | 80 - 120  | °C   | -             |
| Maximum residence time                      | 5         | min  | -             |

Diagrams

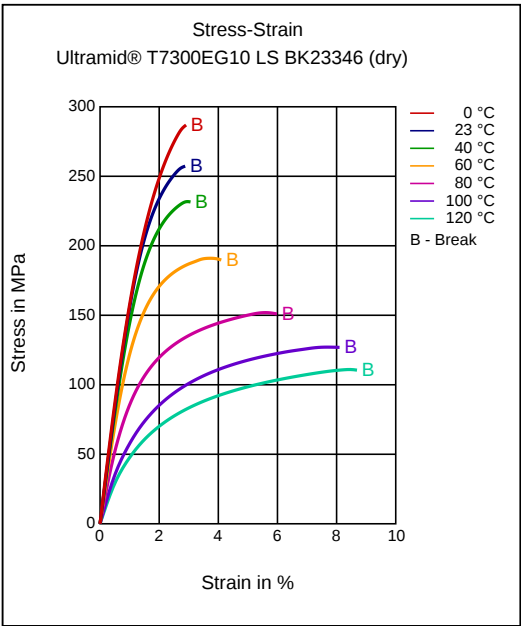
Viscosity-shear rate



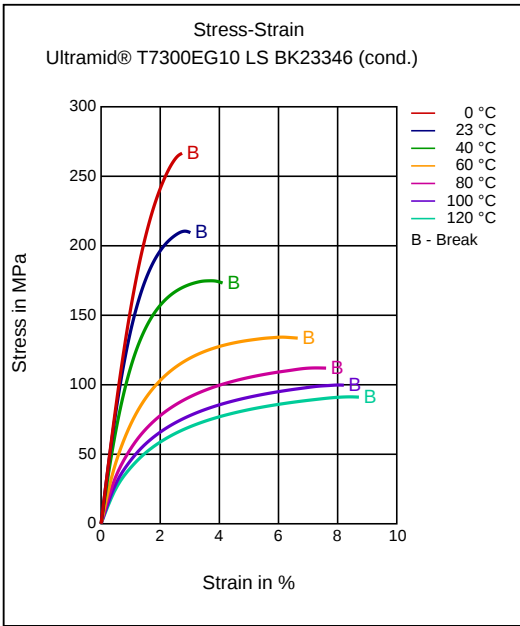
Shearstress-shear rate



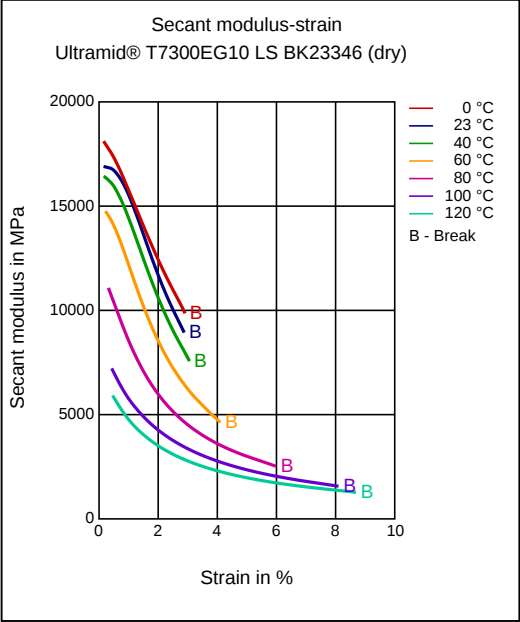
Stress-strain



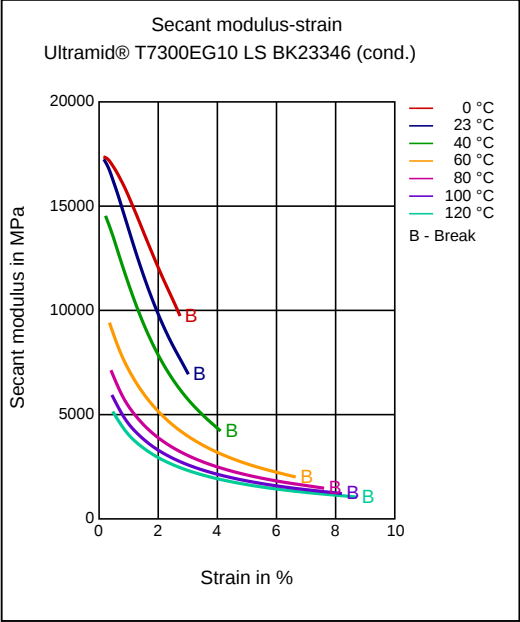
Stress-strain



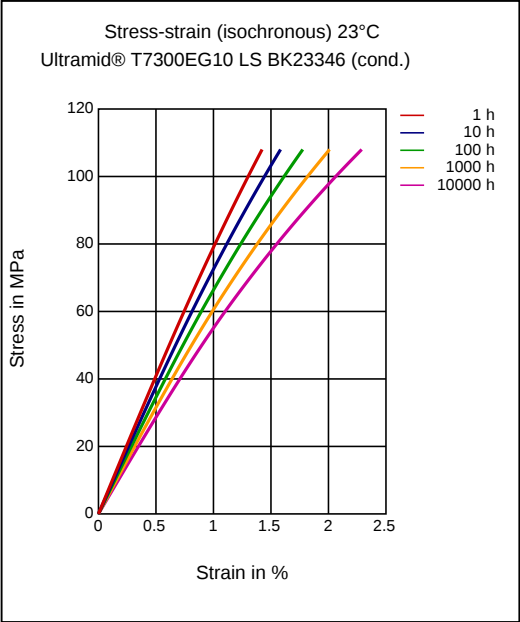
Secant modulus-strain



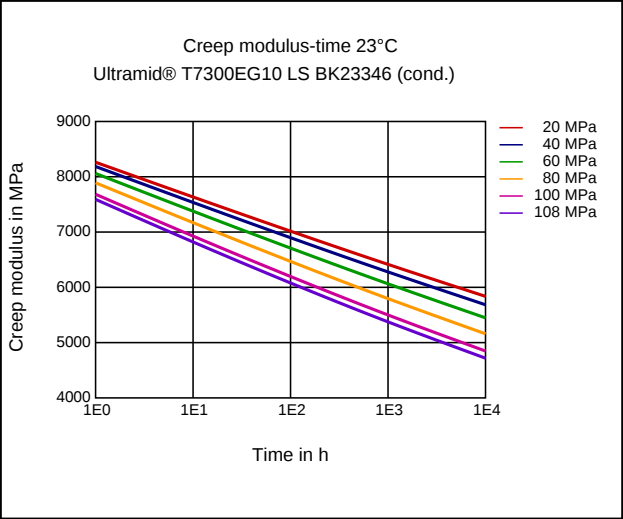
Secant modulus-strain



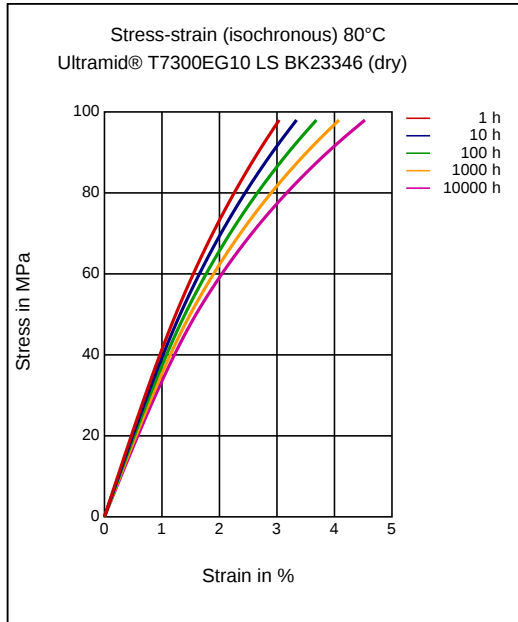
Stress-strain (isochronous) 23 °C



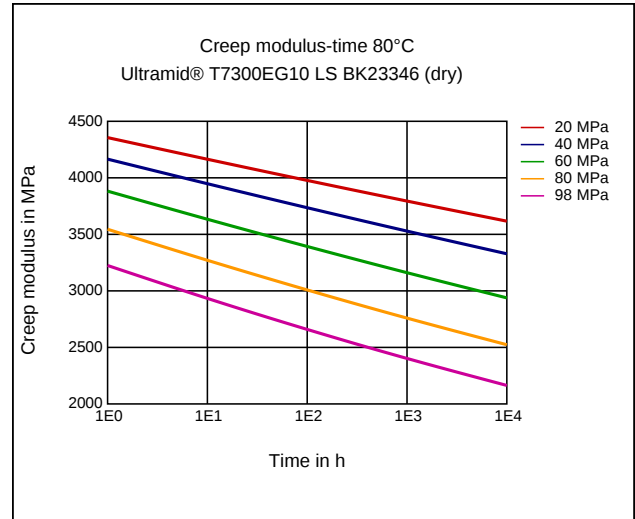
Creep modulus-time 23 °C



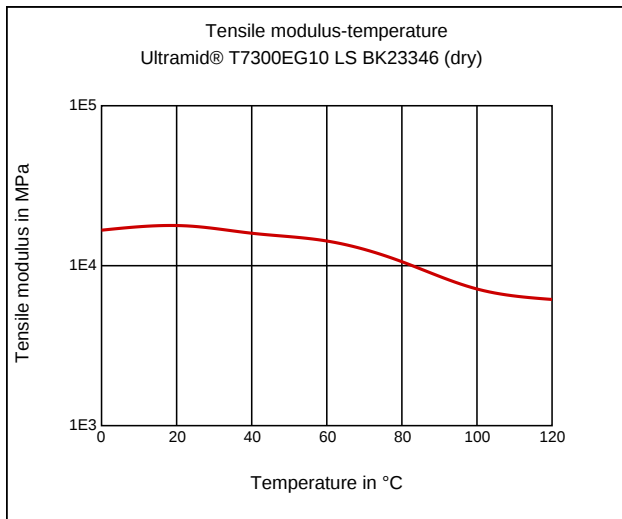
#### Stress-strain (isochronous) 80 °C



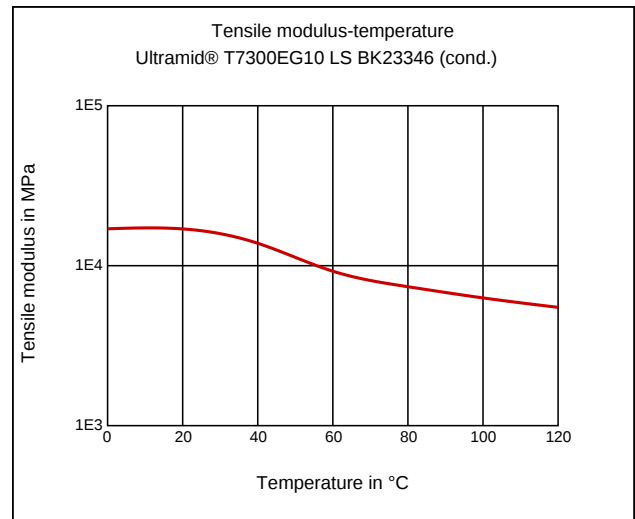
#### Creep modulus-time 80 °C



#### Tensile Modulus-Temperature



#### Tensile Modulus-Temperature



#### Characteristics

##### Processing

Injection Molding

##### Delivery form

Pellets, Black

##### Special Characteristics

Heat aging stabilized

##### Features

Laser Markable

##### Applications

Automotive, Electrical and Electronical

#### Injection Molding

##### PREPROCESSING

Pre/Post-processing, Pre-drying, Temperature: 110 °C

Pre/Post-processing, Pre-drying, Time: 8 h

## PROCESSING

injection molding, Melt temperature, range: 280 - 310 °C  
injection molding, Melt temperature, recommended: 300 °C  
injection molding, Mold temperature, range: 80 - 120 °C  
injection molding, Mold temperature, recommended: 100 °C  
injection molding, Dwell time, thermoplastics: 5 min

## Disclaimer

### Liability Exclusion

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