

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
ISO Data			
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
ISO Data			
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
ISO Data			
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
ISO Data			
Humidity absorption	1.2 / *	%	Sim. to ISO 62
Density	1600 / -	kg/m³	ISO 1183

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

Test specimen production	Value	Unit	Test Standard
ISO Data			
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

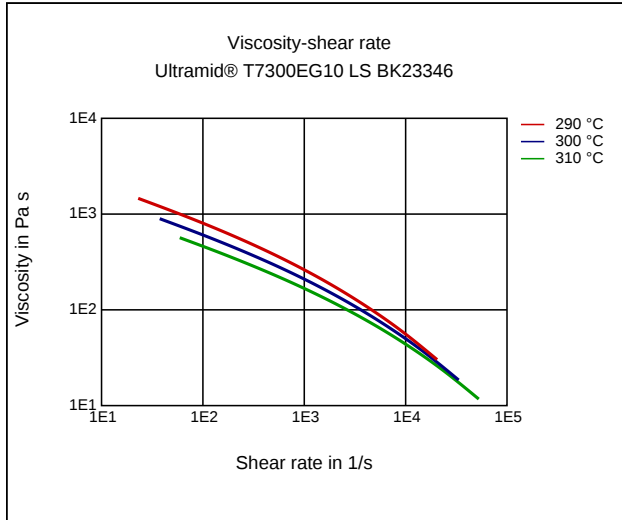
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	110	°C	-
Pre-drying - Time	8	h	-
Processing humidity	≤0.15	%	-
Melt temperature	300 - 320	°C	-
Mold temperature	80 - 120	°C	-
Maximum residence time	5	min	-

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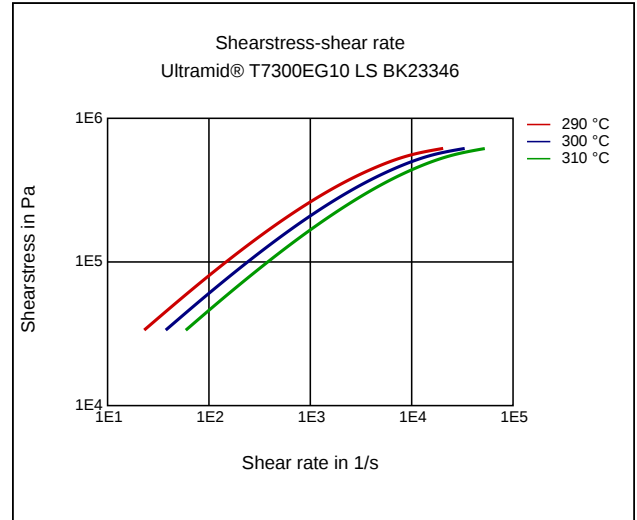
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Diagrams

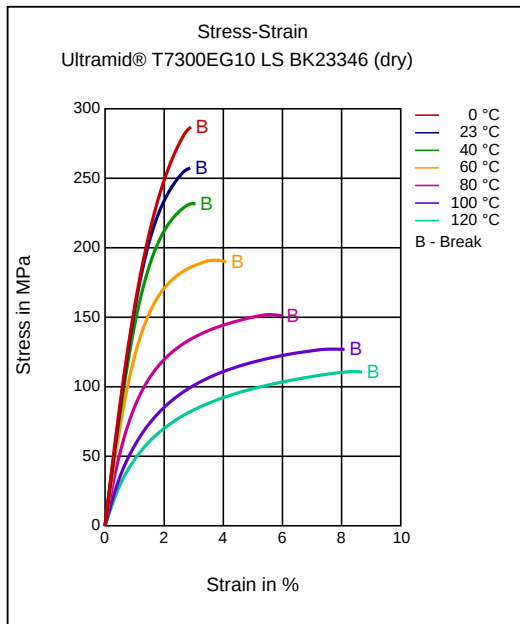
Viscosity-shear rate



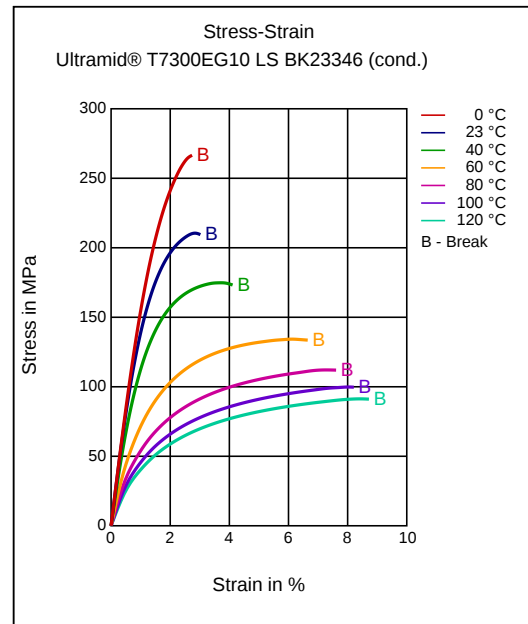
Shearstress-shear rate



Stress-strain



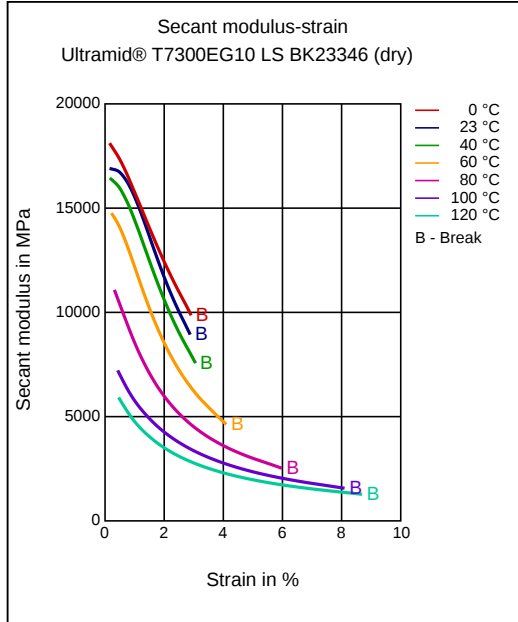
Stress-strain



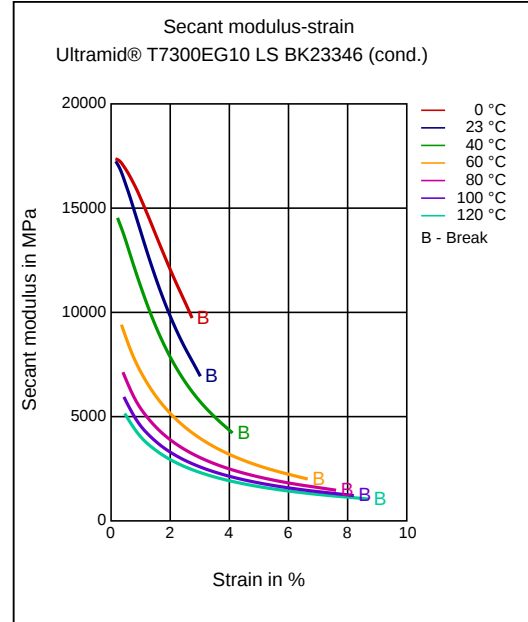
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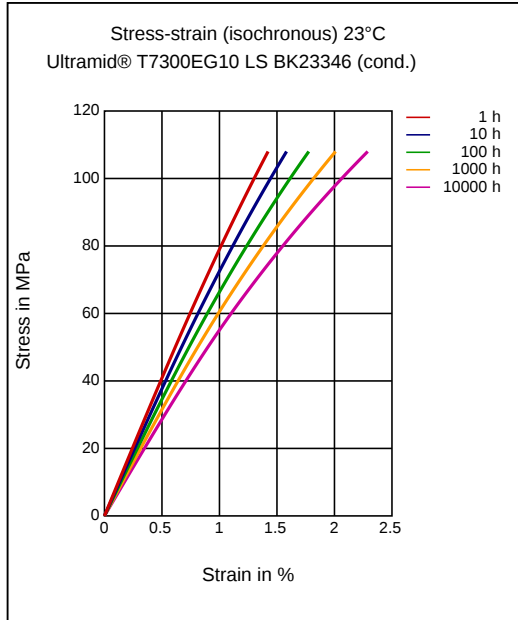
Secant modulus-strain



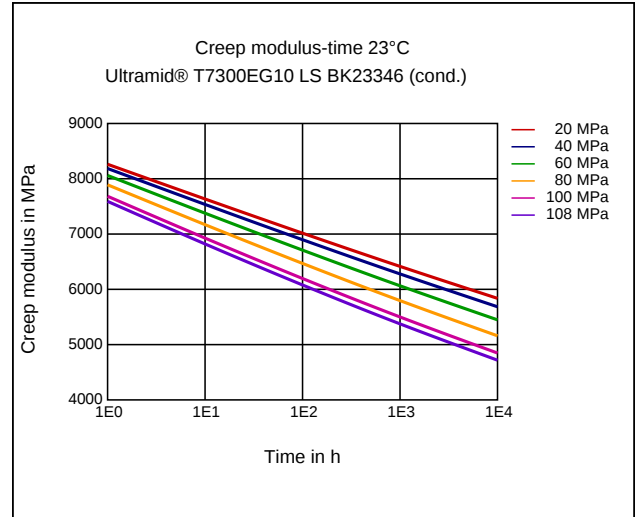
Secant modulus-strain



Stress-strain (isochronous) 23 °C



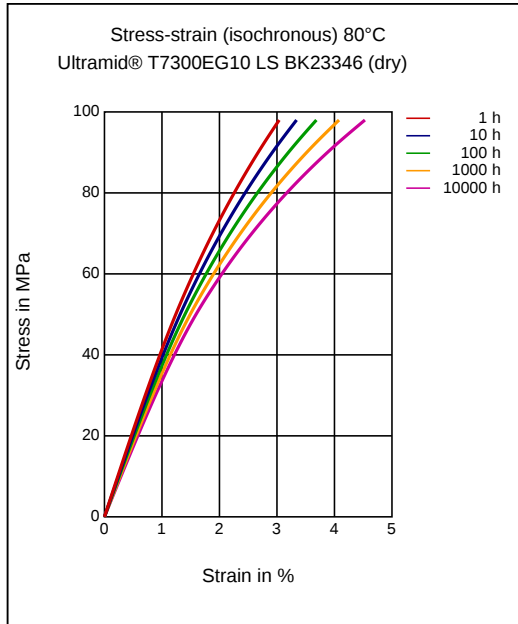
Creep modulus-time 23 °C



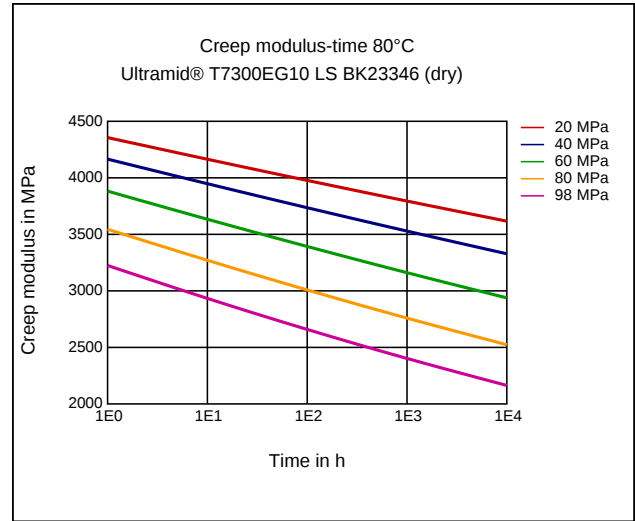
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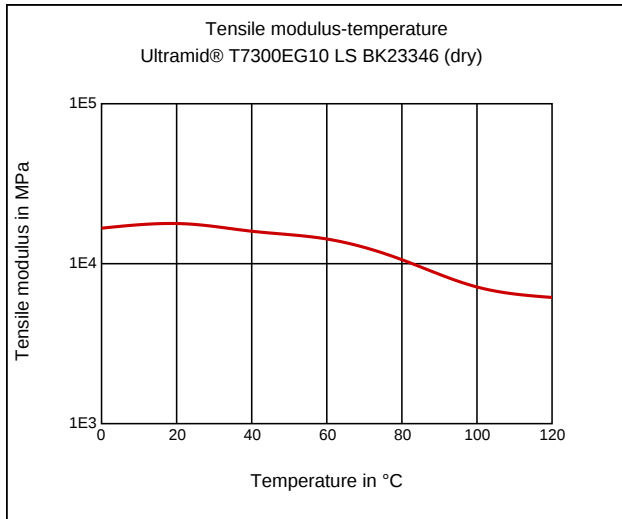
Stress-strain (isochronous) 80 °C



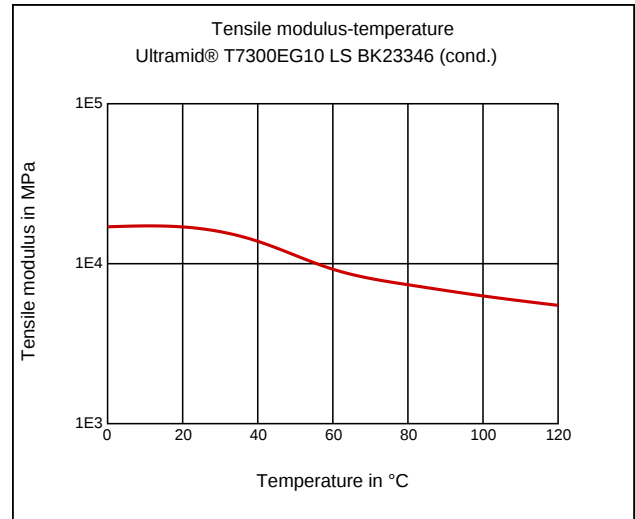
Creep modulus-time 80 °C



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

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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
