Celanese
The chemistry inside innovation™

CELANEX® 2302 GV1/30

CELANEX® PBT

Chemical abbreviation according to ISO 1043-1: PBT Moulding compound ISO 7792- PBT+PET, MGHR, 08-110N, GF30; Polybutylene terephthalate polymer blend with PET, 30 % glass fibre reinforced, injection molded parts with superior gloss. Flammability UL 94 HB minimum thickness 0.82 mm. Recognition by Underwriters Laboratories, USA (UL)

Product information

Resin Identification	(PBT+PET)-GF30	ISO 1043
Part Marking Code	>(PBT+PET)-GF30<	ISO 11469

Rheological properties

Melt volume-flow rate	14	cm^3/10min	ISO 1133
Temperature	509	°F	
Load	4.76	lb	
Viscosity number	2630	in^3/lb	ISO 307, 1628
Molding shrinkage range, parallel	0.2 - 0.3	%	ISO 294-4, 2577
Molding shrinkage range, normal	0.6 - 0.8	%	ISO 294-4, 2577
Molding shrinkage, parallel, annealed	0.4	%	ISO 294-4
Molding shrinkage, normal, annealed	1	%	ISO 294-4

Typical mechanical properties

Tensile modulus	1.52E6	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	21800	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.6	%	ISO 527-1/-2
Flexural strength	30500	psi	ISO 178
Flexural strain at failure	3	%	ISO 178
Charpy impact strength, 23°C	26.6	$ftlb/in^2$	ISO 179/1eU
Charpy impact strength, -30°C	27.6	$ftlb/in^2$	ISO 179/1eU
Charpy notched impact strength, 23°C	4.76	$ftlb/in^2$	ISO 179/1eA
Izod impact strength, -30°C	4.28	$ftlb/in^2$	ISO 180/1U
Ball indentation hardness, H 961/30	31900	psi	ISO 2039-1

Thermal properties

Melting temperature, 10°C/min	491	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	392	°F	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	428	°F	ISO 75-1/-2
Temperature of deflection under load, 8 MPa	257	°F	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	437	°F	ISO 306
Coefficient of linear thermal expansion (CLTE), parallel	0.11	E-4/°F	ISO 11359-1/-2
Thermal conductivity of melt	0.171	W/(m K)	ISO 22007-2
Specific heat capacity of melt	1730	J/(kg K)	ISO 22007-4

Flammability

Burning Behav. at 1.5mm nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	0.0630	in	IEC 60695-11-10
Burning Behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	0.0323	in	IEC 60695-11-10

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UL recognition	yes		UL 94
Oxygen index	20	%	ISO 4589-1/-2

Electrical properties

Relative permittivity, 100Hz	4.4		IEC 62631-2-1
Relative permittivity, 1MHz	4.1		IEC 62631-2-1
Dissipation factor, 100Hz	14	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	170	E-4	IEC 62631-2-1
Volume resistivity	>1E13	Ohm.m	IEC 62631-3-1
Surface resistivity	>1E15	Ohm	IEC 62631-3-2
Electric strength	787	kV/in	IEC 60243-1
Comparative tracking index	250		IEC 60112

Physical/Other properties

Humidity absorption, 2mm	0.15	%	Sim. to ISO 62
Water absorption, 2mm	0.4	%	Sim. to ISO 62
Density	0.056	lb/in^3	ISO 1183
Density of melt	82.4	lb/ft^3	

Injection

Drying Recommended	yes	
Drying Temperature	248	°F
Drying Time, Dehumidified Dryer	4	h
Processing Moisture Content	≤0.02	%
Melt Temperature Optimum	509	°F
Min. melt temperature	491	°F
Max. melt temperature	527	°F
Max. screw tangential speed	0.1 - 0.3	m/s
Mold Temperature Optimum	212	°F
Min. mold temperature	194	°F
Max. mold temperature	266	°F
Ejection temperature	376	°F

Automotive

OEM	STANDARD	ADDITIONAL INFORMATION
Bosch	N28 BN08-GF013	Natural
Bosch	N28 BN08-GF013	Black
FAW Group	JF03-28	Black
General Motors		Jet Black; Special Parts Approval, See Your CE Account Representative for Further Details.
General Motors	GMW16733P-PBT-GF30	Black (10/0900)
Great Wall Motor	MP12-05	Black 10/0907 (EC24 B-Pillar External Panel)
Renault	EP09a, PMR2020, 10/0900, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault	EP11b, PMR2020, 10/0900, No Spec, Special Part Approval, See Your CE Account Manager.	

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Renault	IP07a, PMR2020, 10/0900, No Spec, Special Part Approval, See Your CE Account Manager.	
SAIC Motor	SMTC 5 310 018	10/0907 BLACK
Stellantis - Chrysler	MS.50103 / CPN-4314	Black

Characteristics

Processing	Injection Molding
Additives	Release agent
Special characteristics	Heat stabilized or stable to heat, High Gloss

Additional information

Injection molding

Preprocessing

To avoid hydrolytic degradation during processing, CELANEX resins have to be dried to a moisture level equal to or less than 0,02%. The drying should be done in a dry-air dryer (dew point < -30 °C) with a temperature of 120 to 140 °C and a drying time of 2 to 4 hours. In case of longer residence times in the dry-air dryer, the temperature should be reduced to 100 °C.
The time between drying and processing should be kept as short as possible.
The processing machine feed hopper should be closed during the processing operation.

Processing

Melt Temperature 265-275 °C
Mold Temperature *) 90-100 °C
Maximum Barrel Residence Time **) 5-10 min
Injection Speed fast
Peripheral screw speed max.0,3 m/sec
Back Pressure 10-30 bar
Injection Pressure 600-1000 bar
Holding Pressure 400-800 bar
Nozzle Design open design preferred

Injection speed, injection pressure and holding pressure have to be optimized to the individual article geometry. To avoid material degradation during processing low back pressure and minimum screw speed have to be used. Overheating of the material has to be avoided.

Celanese recommends only externally heated hot runner systems.

*) For moulded parts with especially high requirements to the surface quality or dimensional stability, a mold temperature of up to 110 °C can be advantageous.

**) If the cylinder temperatures are higher than the recommended maximum temperatures, the max. residence time in the barrel has to be reduced.

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Processing Notes

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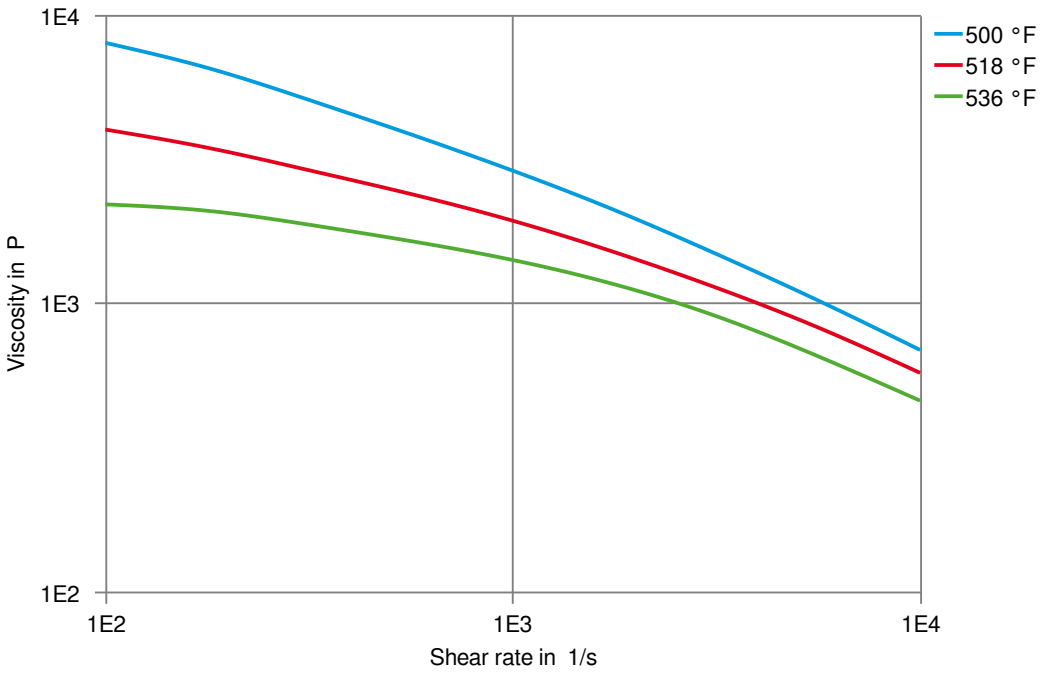
Pre-Drying

CELANEX should in principle be predried. Because of the necessary low maximum residual moisture content the use of dry air dryers is recommended. The dew point should be =< - 30° C. The time between drying and processing should be as short as possible.

Storage

For subsequent storage of the material in the dryer until processed (<= 60 h) it is necessary to lower the temperature to 100° C.

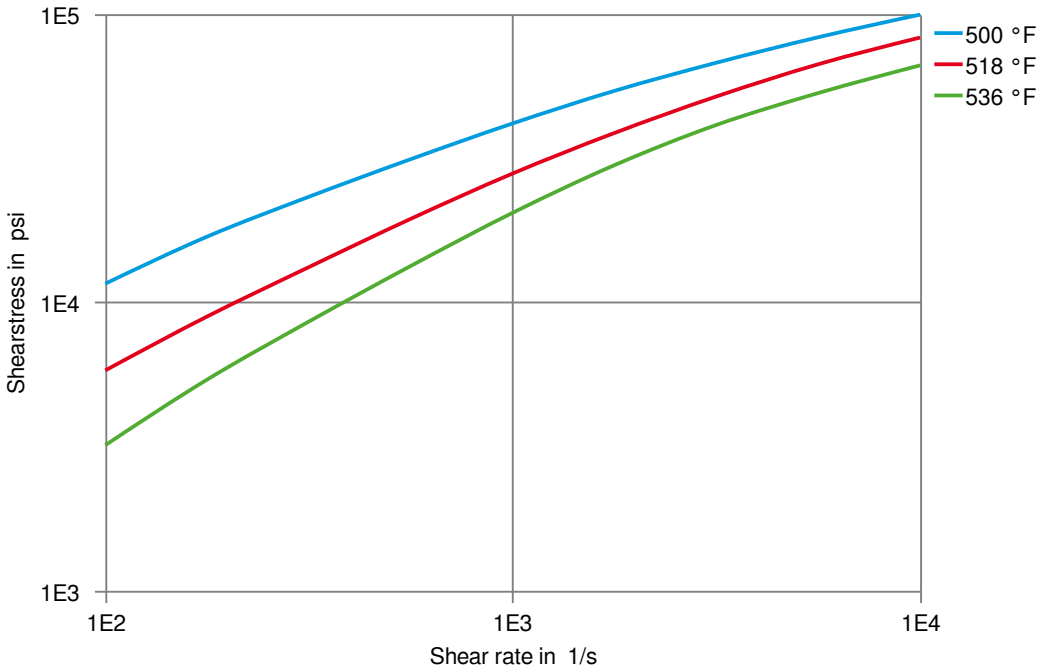
Viscosity-shear rate



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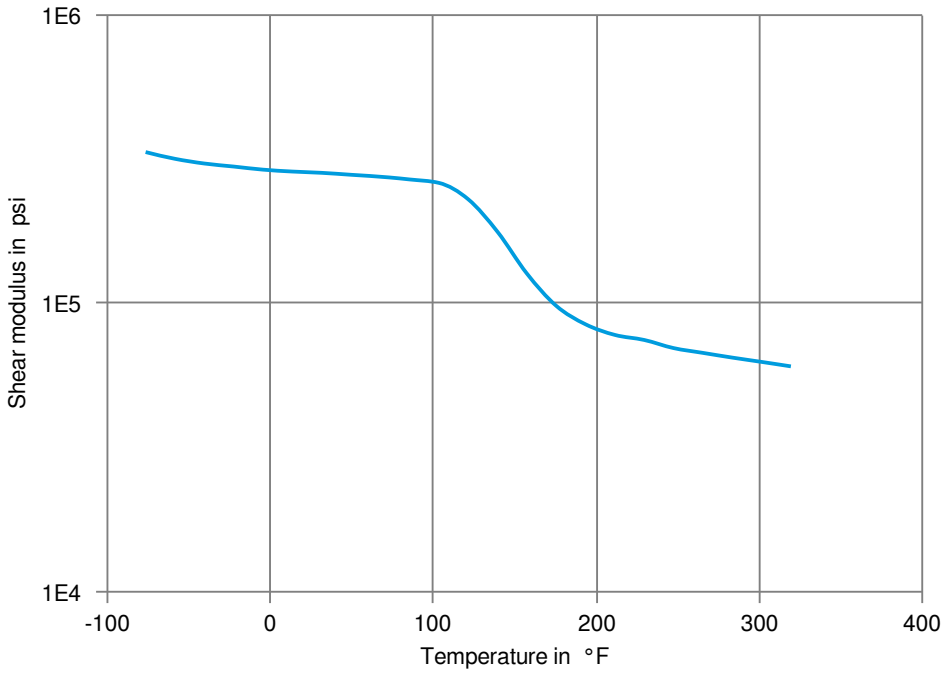
Shearstress-shear rate



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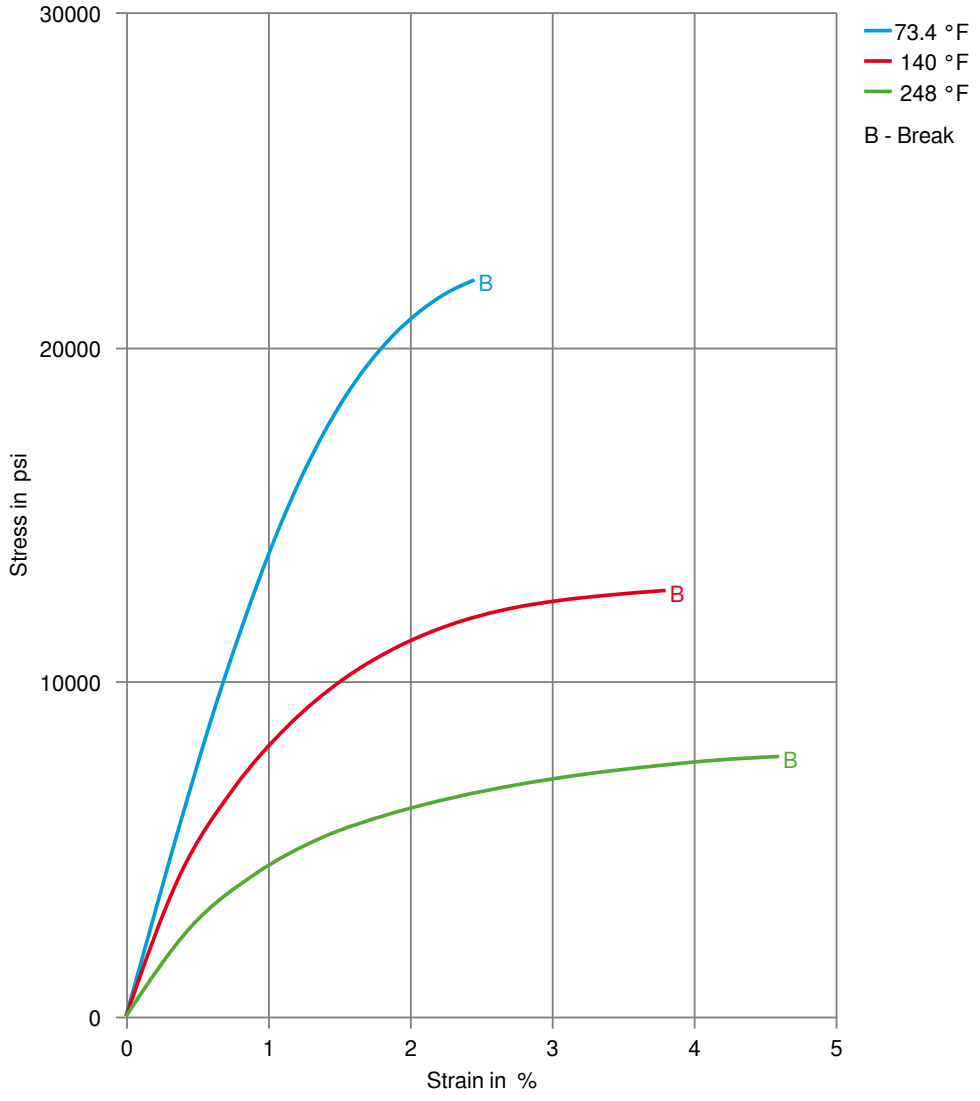
Dynamic Shear modulus-temperature



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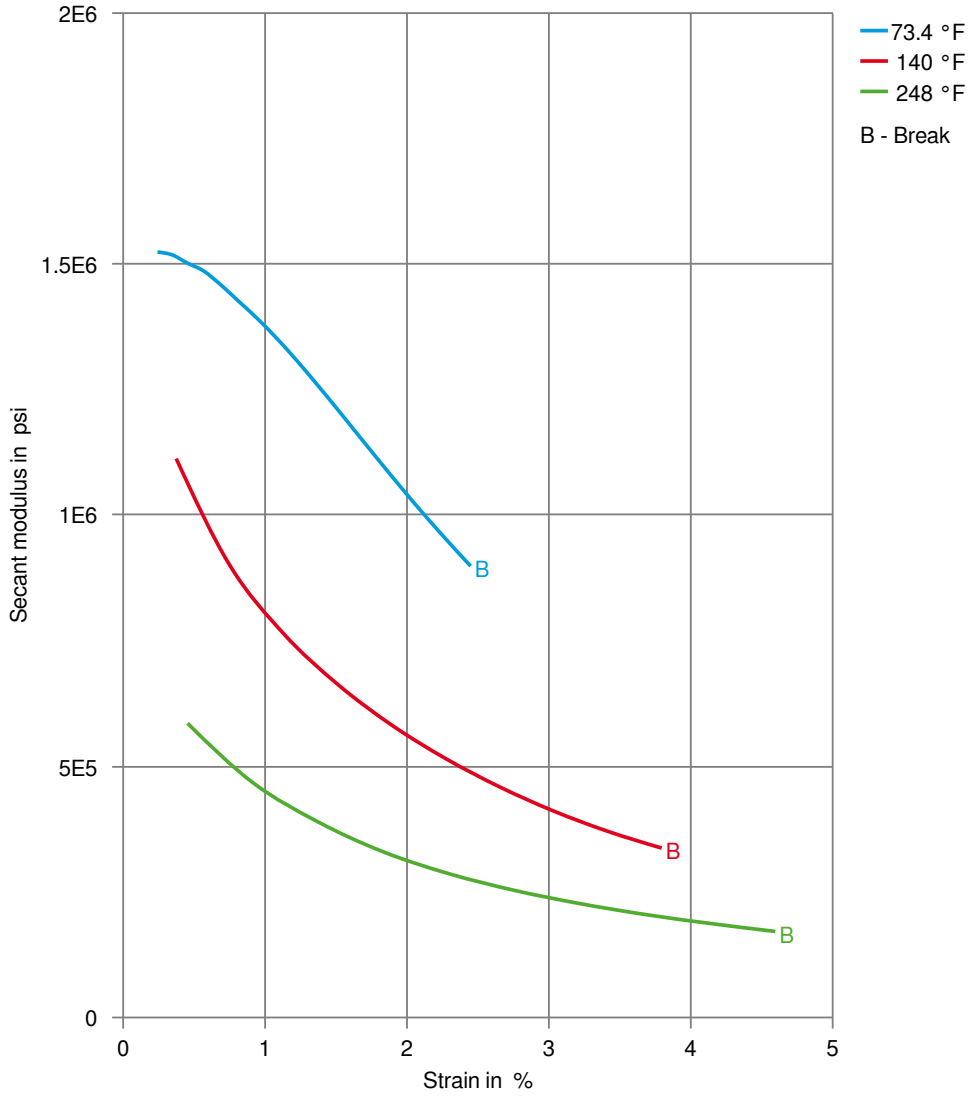
Stress-strain



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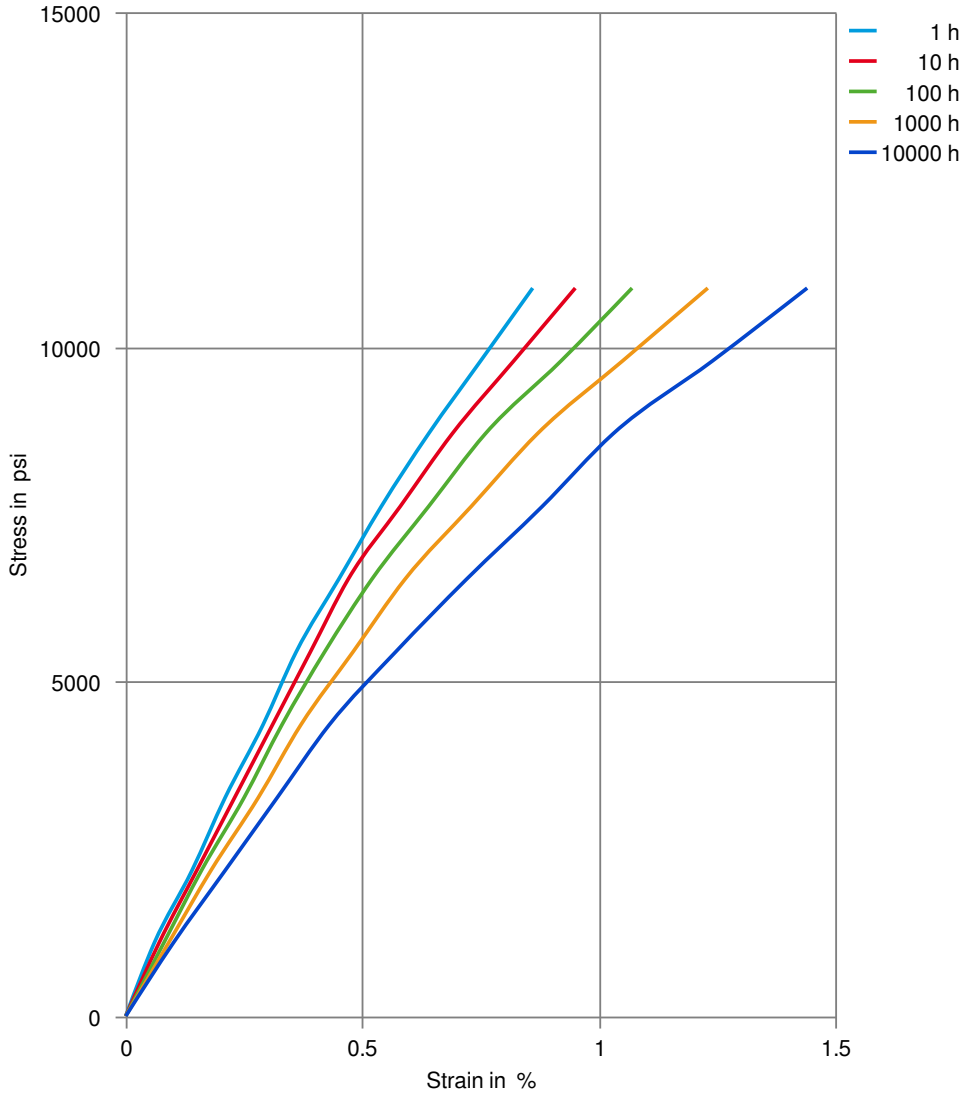
Secant modulus-strain



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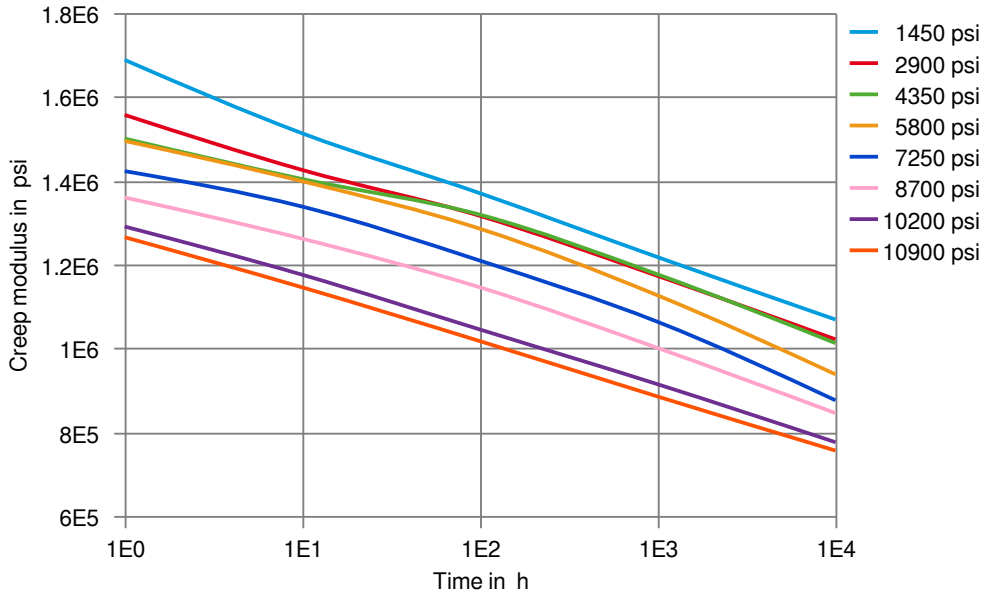
Stress-strain (isochronous) 73.4 °F



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Creep modulus-time 73.4 °F



Revised: 2026-03-03 Source: Celanese Materials Database

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colorants or other additives may cause significant variations in data values. Properties of molded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Other than those products expressly identified as medical grade (including by MT® product designation or otherwise), Celanese's products are not intended for use in medical or dental implants. Regardless of any such product designation, any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products.
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