Celanese
The chemistry inside innovation™

Zytel® 70G35HSLRA4 BK267

NYLON RESIN

Common features of Zytel® nylon resin include mechanical and physical properties such as high mechanical strength, excellent balance of stiffness and toughness, good high temperature performance, good electrical and flammability properties, good abrasion and chemical resistance. In addition, Zytel® nylon resins are available in different modified and reinforced grades to create a wide range of products with tailored properties for specific processes and end-uses. Zytel® nylon resin, including most flame retardant grades, offer the ability to be coloured.

The good melt stability of Zytel® nylon resin normally enables the recycling of properly handled production waste. If recycling is not possible, we recommend, as the preferred option, incineration with energy recovery (-31kJ/g of base polymer) in appropriately equipped installations. For disposal, local regulations have to be observed.

Zytel® nylon resin typically is used in demanding applications in the automotive, furniture, domestic appliances, sporting goods and construction industry.

Zytel® 70G35HSLRA4 BK267 is a 35% glass fiber reinforced, heat stabilized, polyamide 66 resin for injection molding. It has excellent flow characteristics.

Product information

Resin Identification	PA66-GF35	ISO 1043
Part Marking Code	>PA66-GF35<	ISO 11469
ISO designation	ISO 16396-PA66,GF35,M1CGHRW,S12-110	
Infrared spectrum	available	
TGA curve	available	ISO 11358-1

Rheological properties

	dry/cond.		
Viscosity number	3460[1]/*	in³/lb	ISO 307, 1628
Molding shrinkage, parallel	0.4 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	1.1 / -	%	ISO 294-4, 2577

[1]: sulfuric acid 96% (110 cm³/g in formic acid 90%)

Typical mechanical properties

	dry/cond.		
Tensile modulus	1.6E6 / 1.16E6	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	30500 / 19600	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	3 / 5	%	ISO 527-1/-2
Flexural modulus	1.45E6 / 1.09E6	psi	ISO 178
Flexural strength	43500 / 33400	psi	ISO 178
Tensile creep modulus, 1h	* / 1.09E6	psi	ISO 899-1
Tensile creep modulus, 1000h	* / 725000	psi	ISO 899-1
Charpy impact strength, 23°C	33.3 / 47.6	ftlb/in²	ISO 179/1eU
Charpy impact strength, -30°C	28.5 / 38.1	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	6.18 / 7.61	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -30°C	4.76 / 4.76	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -40°C	4.76 / 4.76	ftlb/in²	ISO 179/1eA
Puncture energy, 23°C	6 / -	J	ISO 6603-2
Izod notched impact strength, 23°C	6.66 / 7.61	ftlb/in²	ISO 180/1A
Izod notched impact strength, -40°C	4.76 / -	ftlb/in²	ISO 180/1A
Izod impact strength, 23°C	28.5 / -	ftlb/in²	ISO 180/1U
Izod impact strength, -30°C	28.5 / -	ftlb/in²	ISO 180/1U
Hardness, Rockwell, M-scale	110 / -		ISO 2039-2
Hardness, Rockwell, R-scale	125 / 117		ISO 2039-2

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Ball indentation hardness, H 961/30	41300 / -	psi	ISO 2039-1

Thermal properties

	dry/cond.		
Melting temperature, 10 °C/min	496 / *	°F	ISO 11357-1/-3
Glass transition temperature, 10 °C/min	149 / 68	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	482 / *	°F	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	491 / *	°F	ISO 75-1/-2
Vicat softening temperature, 50 °C/h 50N	491 / *	°F	ISO 306
Coefficient of linear thermal expansion (CLTE), parallel	0.12 / *	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), parallel, -40-23 °C	0.128 / *	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), parallel, 55-160 °C	0.0778 / *	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	0.383 / *	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal, -40-23 °C	0.344 / *	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal, 55-160 °C	0.778 / *	E-4/°F	ISO 11359-1/-2
Thermal conductivity of melt	0.22	W/(m K)	ISO 22007-2
Specific heat capacity of melt	2300	J/(kg K)	ISO 22007-4

Flammability

	dry/cond.		
Burning Behav. at 1.5mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	0.0591 / *	in	IEC 60695-11-10
Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.0276 / *	in	IEC 60695-11-10
Oxygen index	21 / *	%	ISO 4589-1/-2
Glow Wire Flammability Index, 2.0mm	1200 / -	°F	IEC 60695-2-12
Glow Wire Flammability Index, 3.0mm	1380 / -	°F	IEC 60695-2-12
FMVSS Class	SE / B		ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	1.61	in/min	ISO 3795 (FMVSS 302)

Electrical properties

	dry/cond.		
Volume resistivity	1E13 / 1E9	Ohm.m	IEC 62631-3-1
Surface resistivity	* / 1E13	Ohm	IEC 62631-3-2
Electric strength	940 / 610	kV/in	IEC 60243-1
Comparative tracking index	450 / -		IEC 60112

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.7 / *	%	Sim. to ISO 62
Water absorption, 2mm	5.5 / *	%	Sim. to ISO 62
Water absorption, Immersion 24h	1.1 / *	%	Sim. to ISO 62
Density	0.0509 / -	lb/in³	ISO 1183
Density of melt	79.3	lb/ft³	

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Emissions

	dry/cond.		
Odor test	3	class	VDA 270
Fogging, G-value (condensate)	0.5 / *	mg	ISO 6452

Injection

Drying Recommended	yes	
Drying Temperature	176	°F
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	≤0.2	%
Melt Temperature Optimum	563	°F
Min. melt temperature	545	°F
Max. melt temperature	581	°F
Max. screw tangential speed	≤0.2	m/s
Mold Temperature Optimum	203	°F
Min. mold temperature	158	°F
Max. mold temperature	248	°F
Hold pressure range	7250 - 14500	psi
Hold pressure time	0.0762	s/mil
Hold Pressure Time (h is the max. wall thickness of the part in mm)	h^2+2	s
Ejection temperature	403	°F

Automotive

OEM	STANDARD	ADDITIONAL INFORMATION
Bosch	N28 BN02-GF073	
Ford	WSS-M4D673-B1	
General Motors	GMW3038P-PA66-GF35H	Color Black BK267
General Motors	GMW3038P-PA66-GF35J	Color Black BK267
Hyundai	MS211-36 Type A-1	
Renault-Nissan	AS22, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault-Nissan	AS23, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault-Nissan	AS23-a, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault-Nissan	UB01b, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault-Nissan	UB02a, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault-Nissan	UB02d, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault-Nissan	UB03h, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault-Nissan	UB08a, No Spec, Special Part Approval, See Your CE Account Manager.	

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Renault-Nissan	UB08c, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault-Nissan	UB09b, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault-Nissan	UB12a, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault-Nissan	UB15b, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault-Nissan	UB20a, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault-Nissan	UB20b, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault-Nissan	UB20c, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault-Nissan	UB20d, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault-Nissan	UB23, No Spec, Special Part Approval, See Your CE Account Manager.	
Stellantis	MS.50150 / PA66.GF35.10000T.11C.HS	01994_15_00058;CPN1900, 61/217M-/220E*/11/H115
Stellantis - Chrysler	MS.50017 / CPN-1900	Black
VW Group	VW 50127 PA66-8	
VW Group	VW 50133 PA66-7-A	
Valeo	PDTNVC15006 RevE	PA66-GF35 Class 3
Valeo	PDTNVC15006 RevE	PA66-GF35 Class 6
Valeo	PDTNVC15006 RevE	PA66-GF35 Class 4A

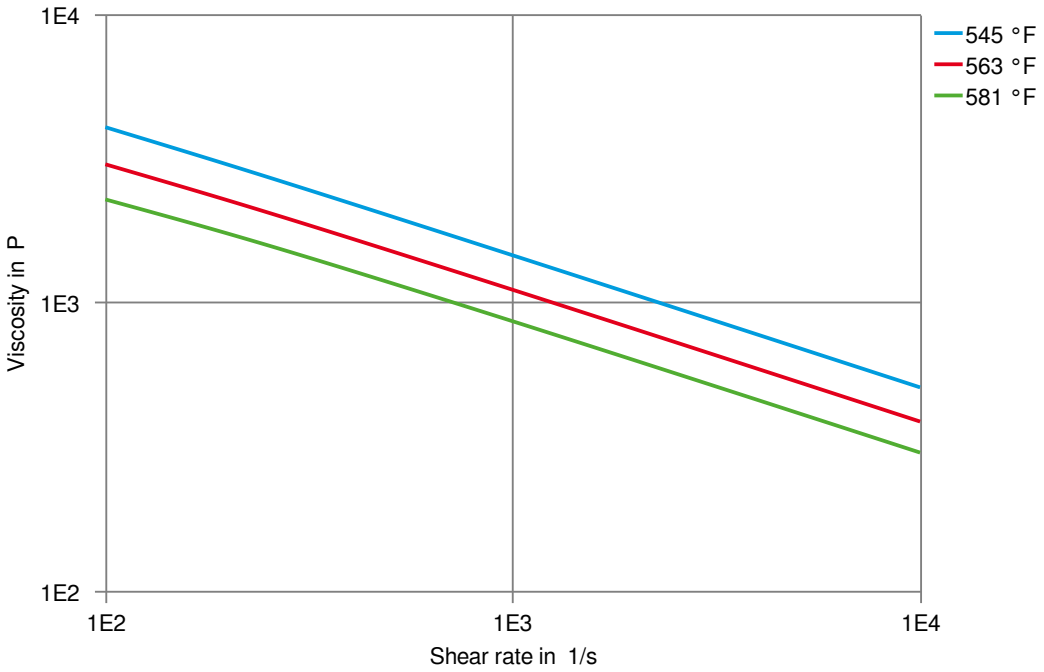
Characteristics

Processing	Injection Molding
Additives	Release agent
Special characteristics	Heat stabilized or stable to heat, Hydrolysis resistant

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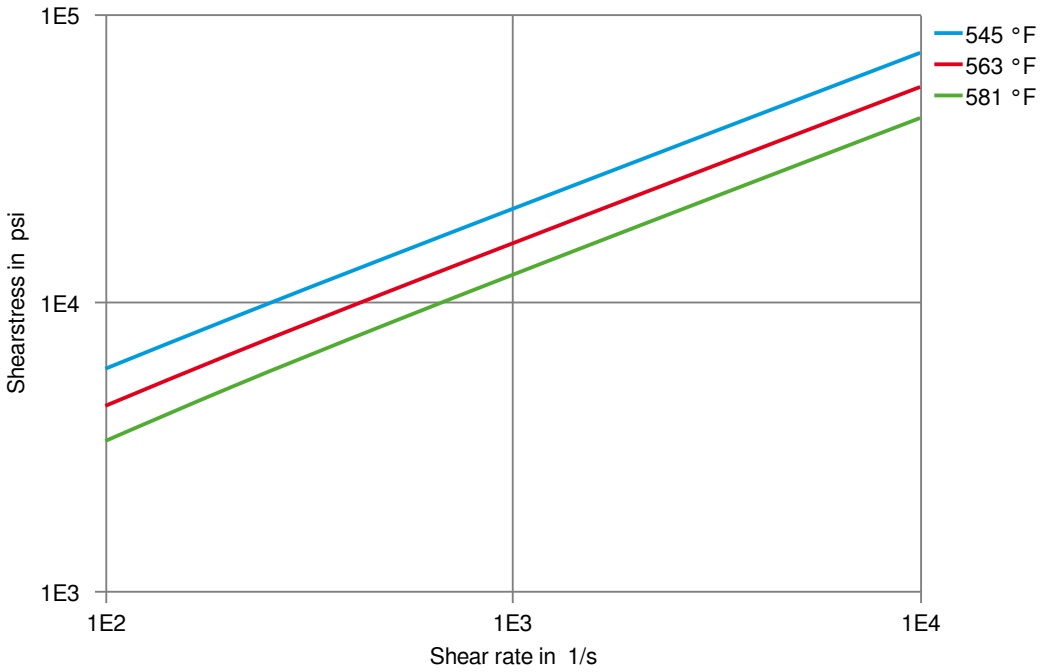
Viscosity-shear rate



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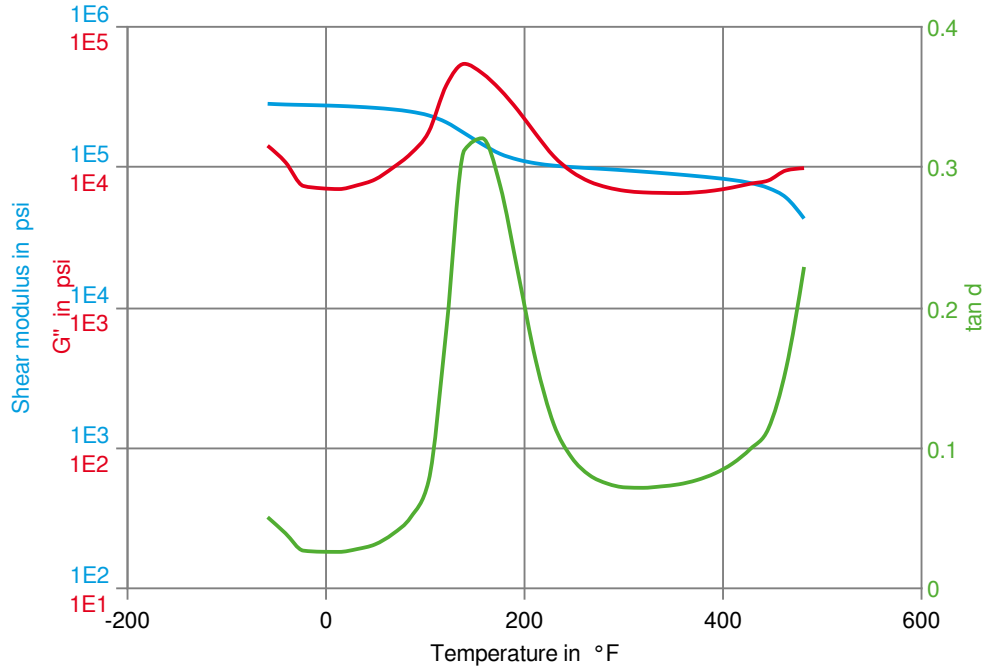
Shearstress-shear rate



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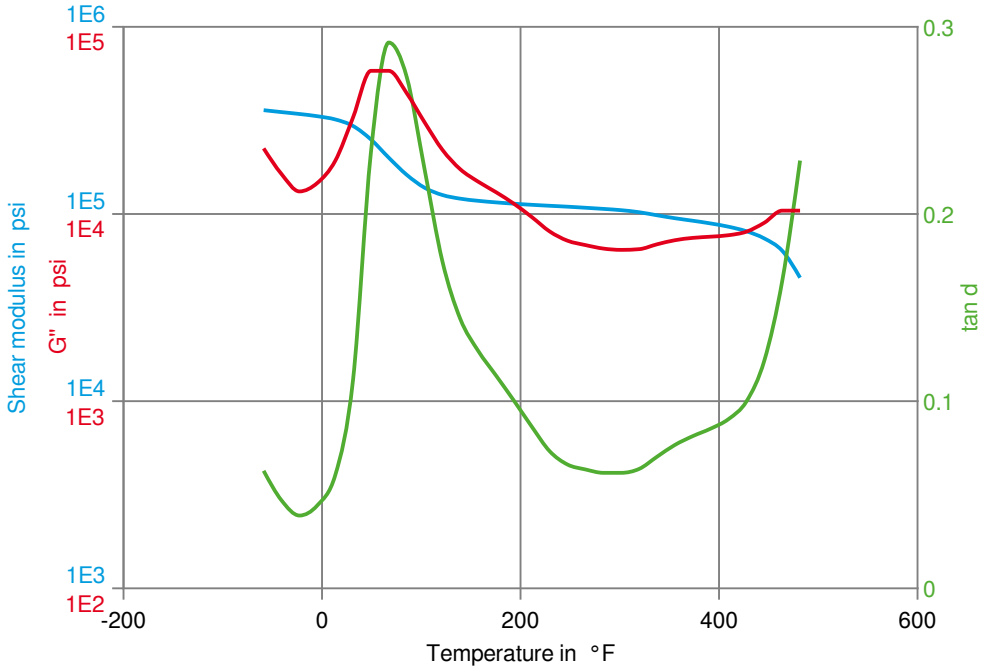
Dynamic Shear modulus-temperature (dry)



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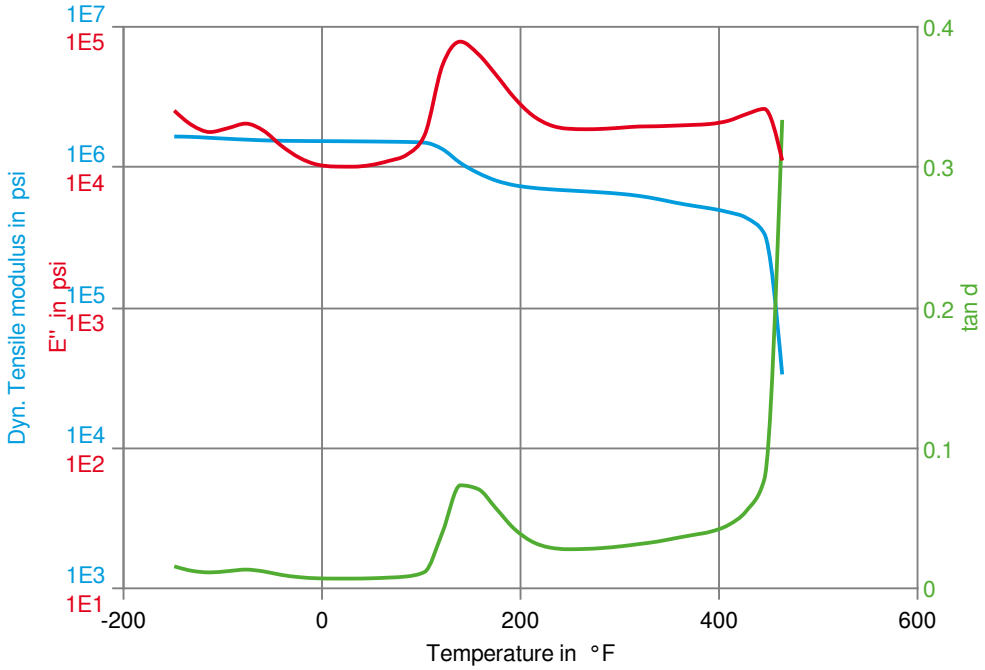
Dynamic Shear modulus-temperature (cond.)



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Dynamic Tensile modulus-temperature (dry)

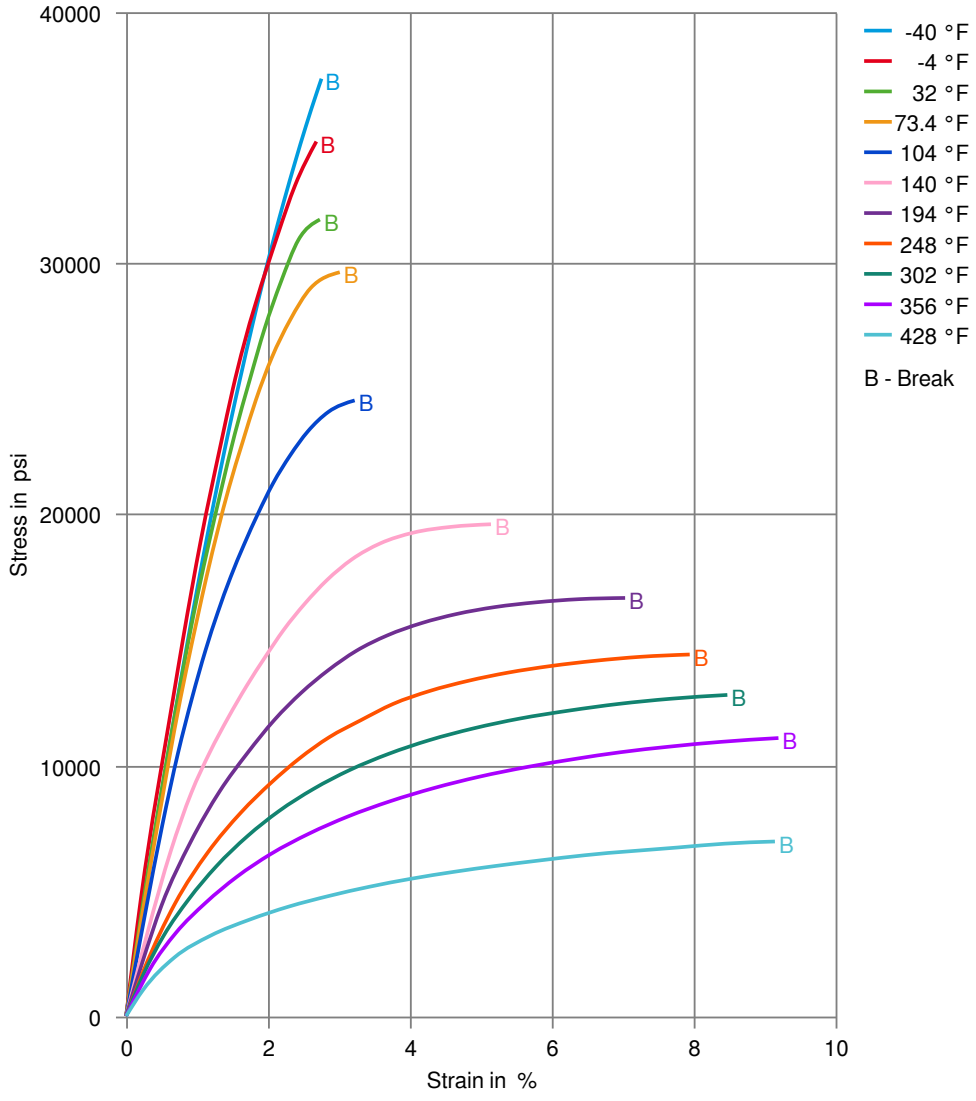


Revised: 2026-08-12 Source: Celanese Materials Database

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Stress-strain (dry)

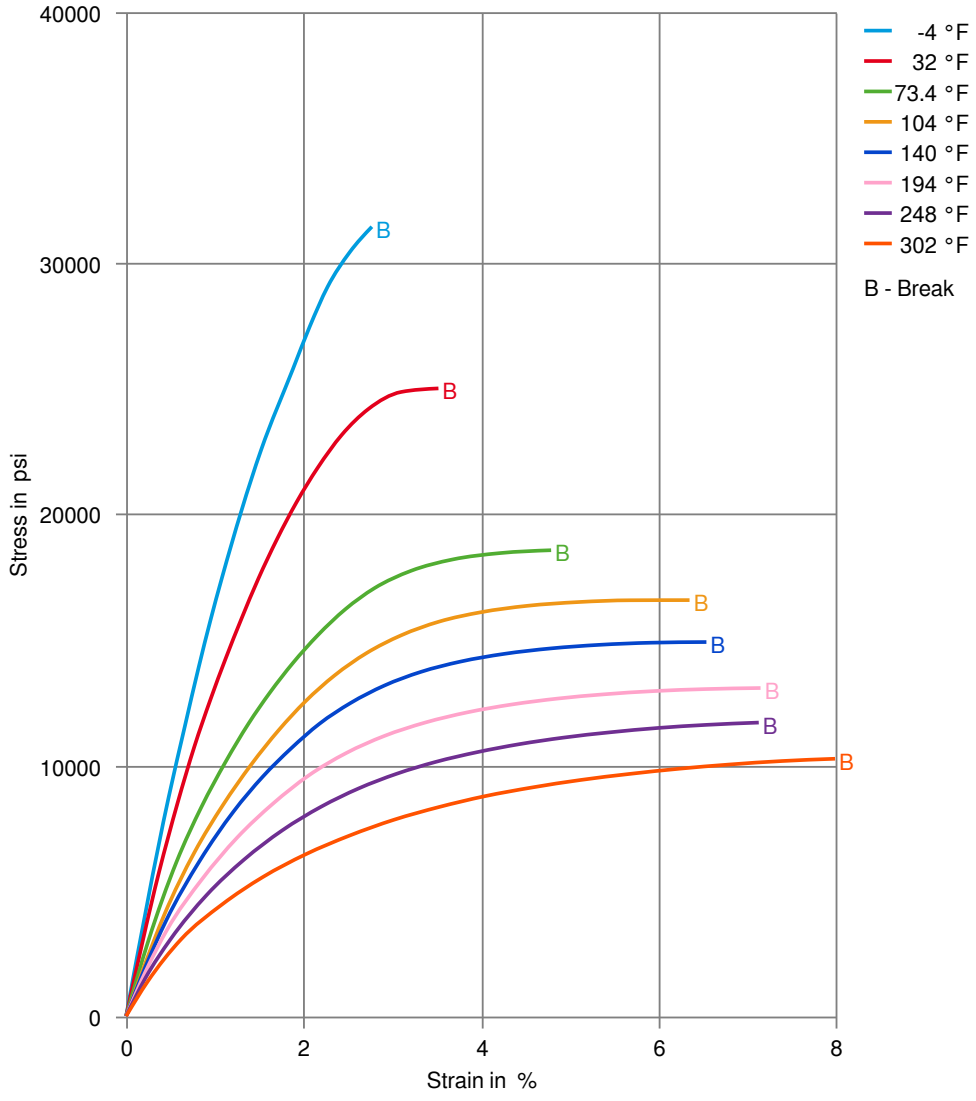


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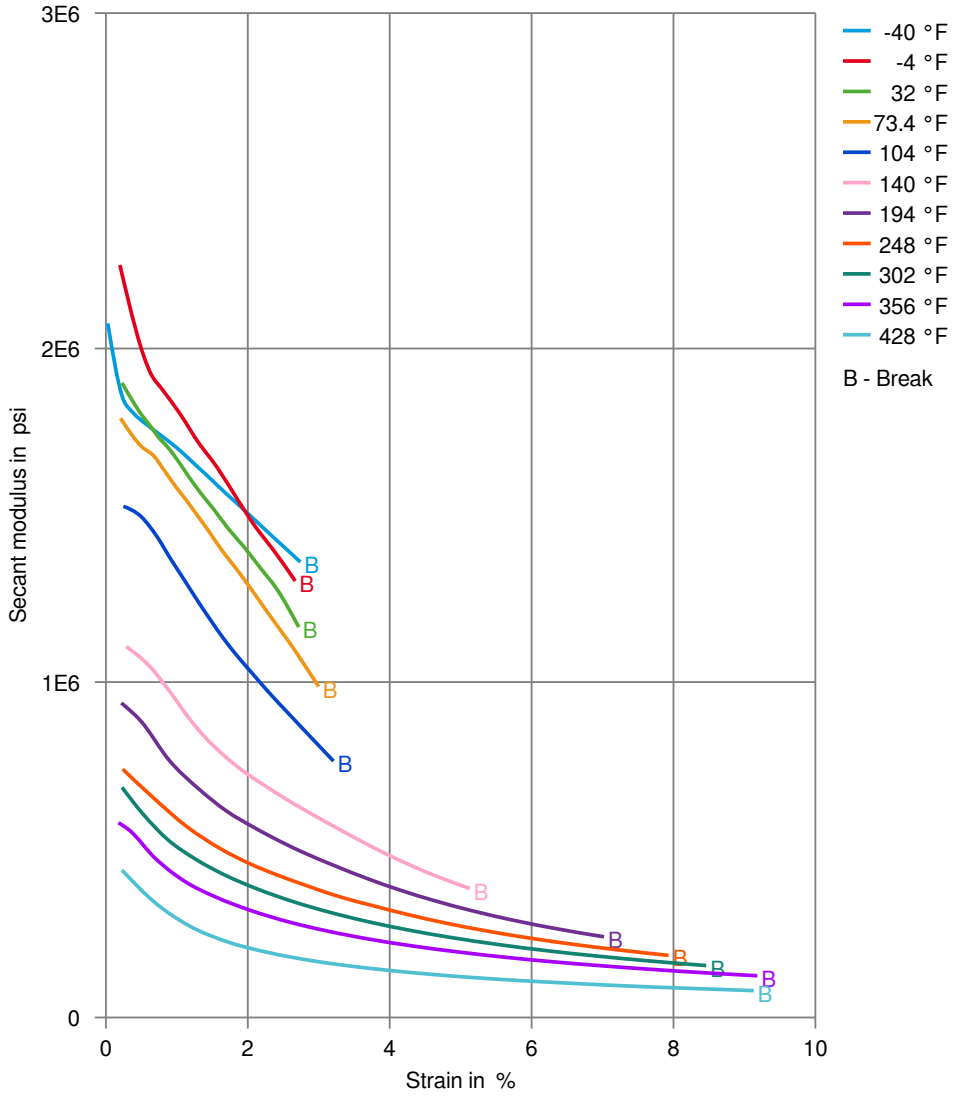
Stress-strain (cond.)



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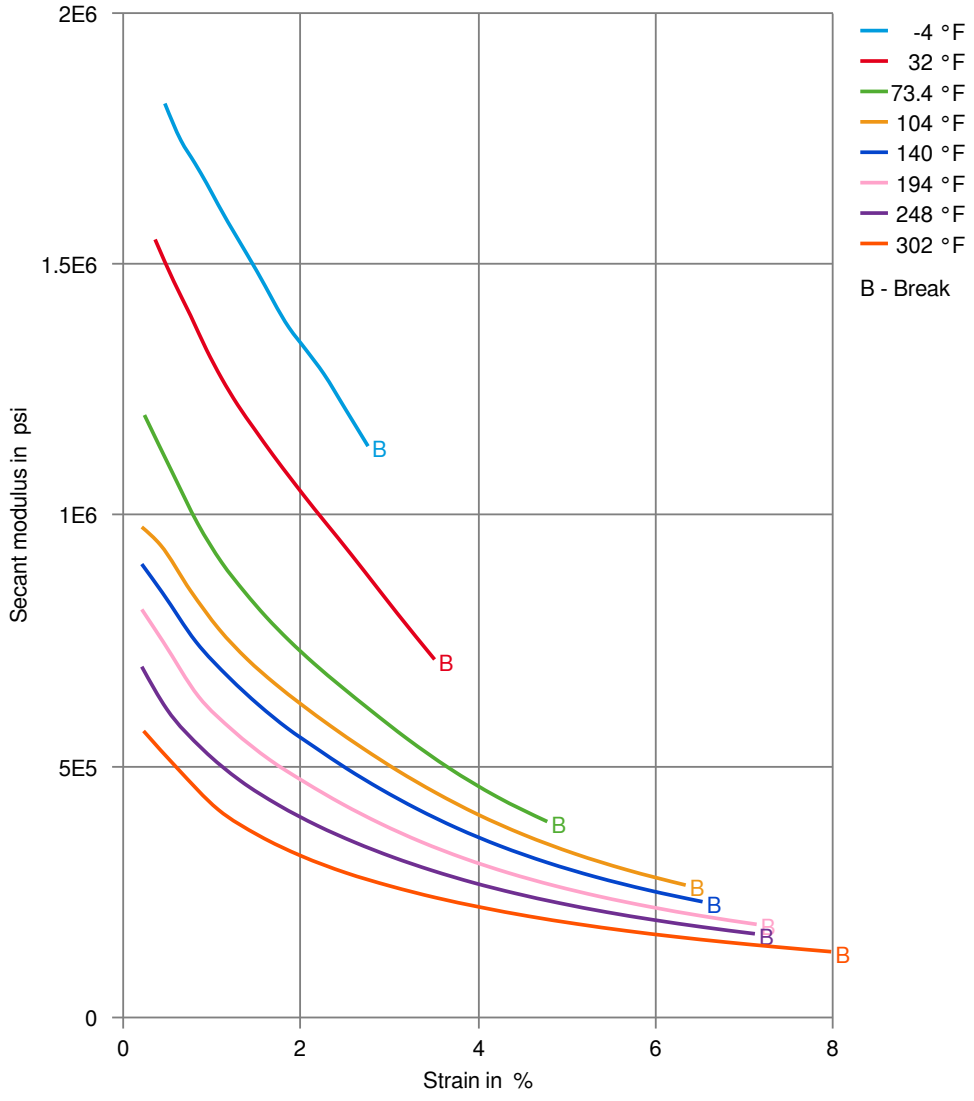
Secant modulus-strain (dry)



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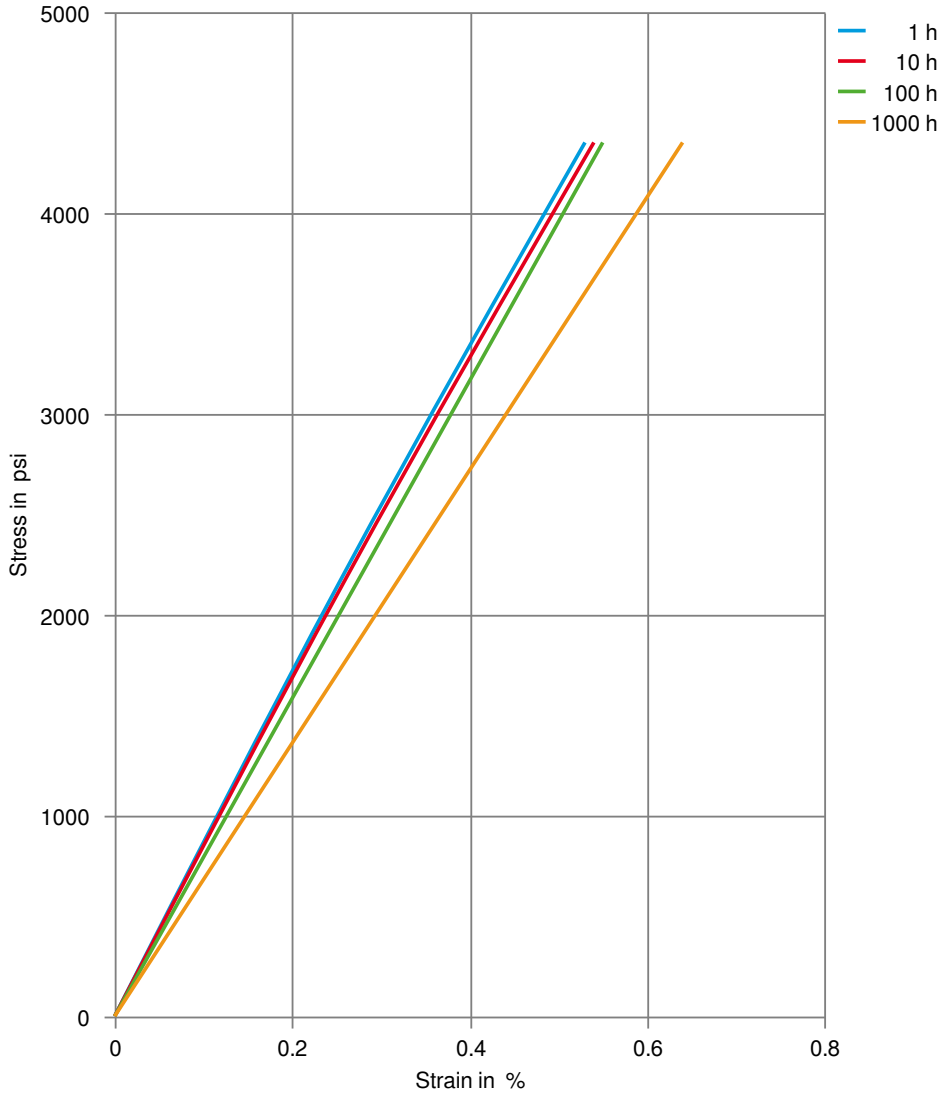
Secant modulus-strain (cond.)



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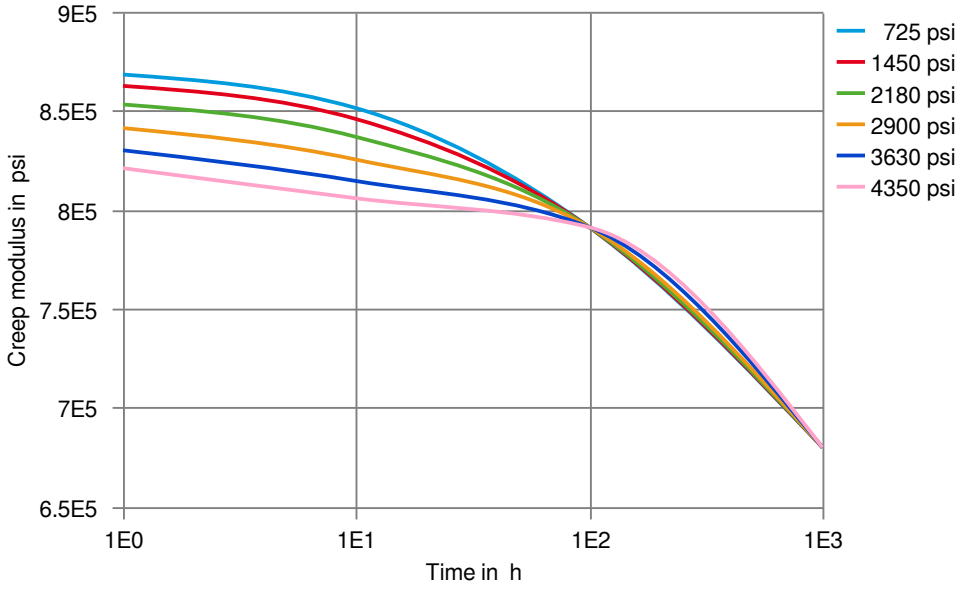
Stress-strain (isochronous) °F (dry)
(measured on Zytel® 70G35HSLX BK357)



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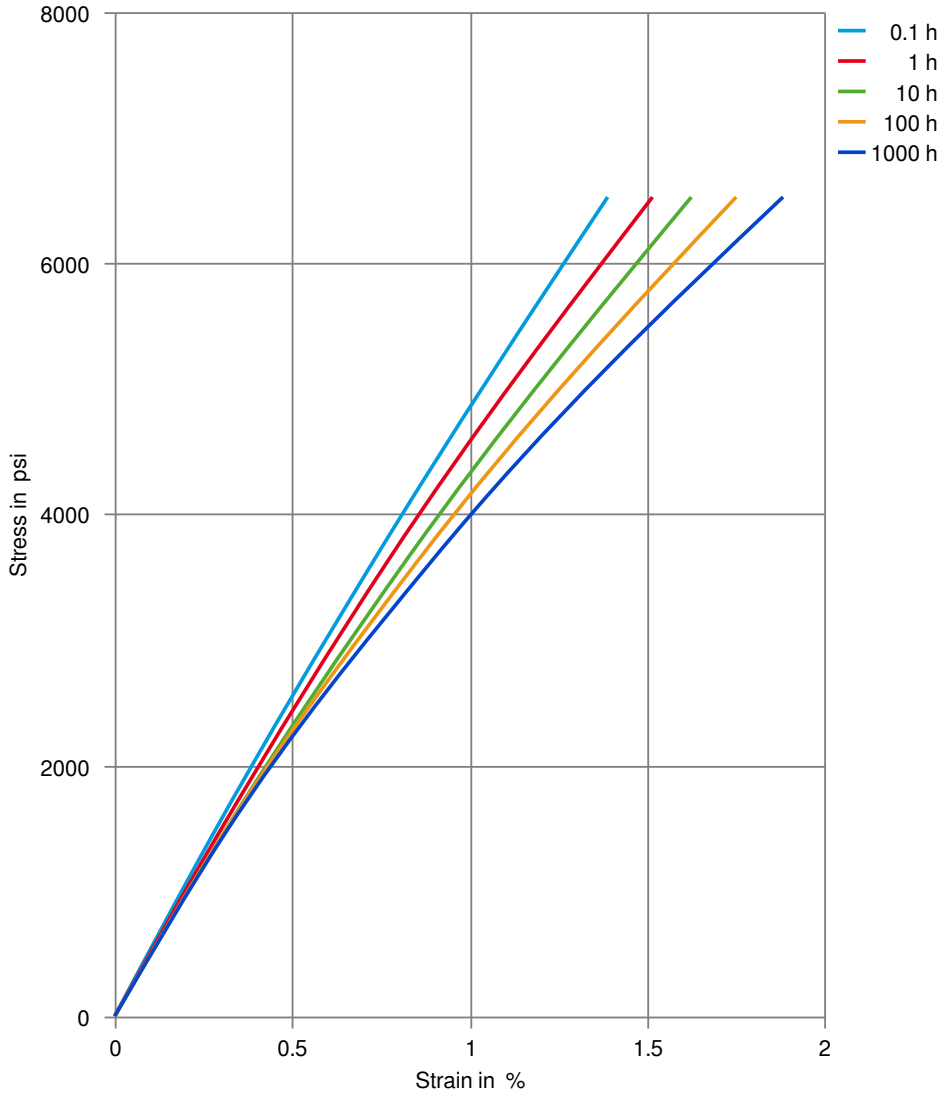
Creep modulus-time °F (dry)
(measured on Zytel® 70G35HSLX BK357)



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NYLON RESIN

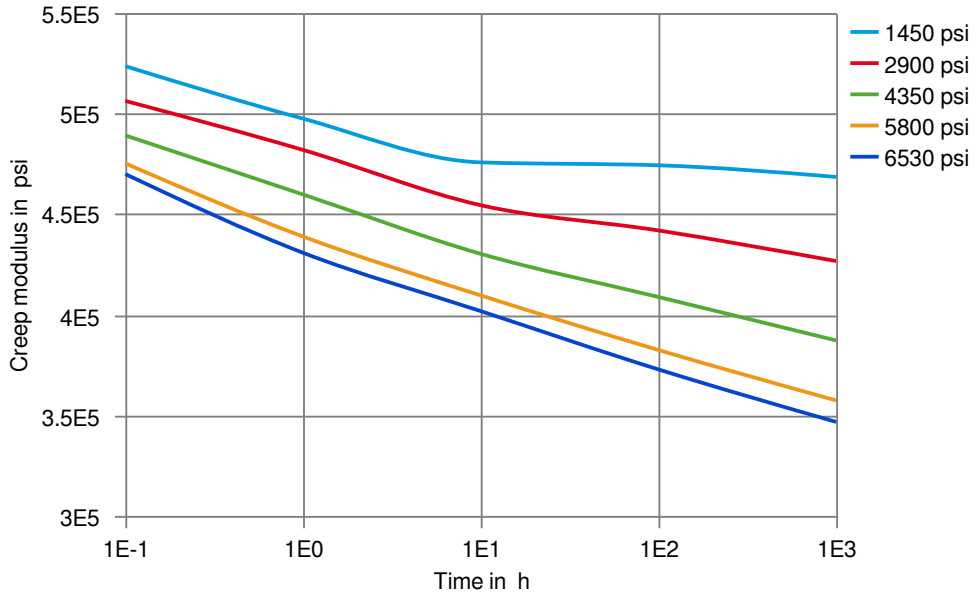
Stress-strain (isochronous) °F (dry)
(measured on Zytel® 70G35HSLX BK357)



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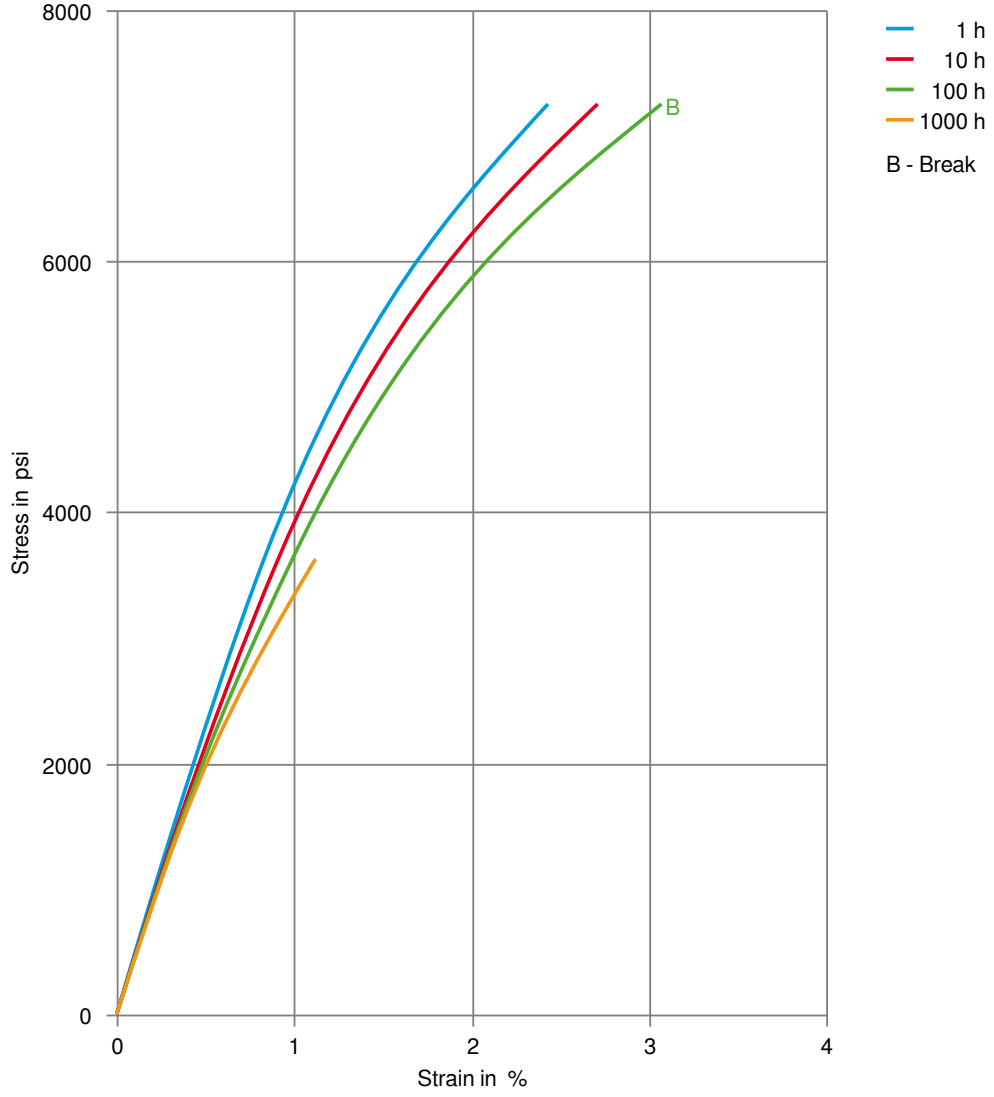
Creep modulus-time °F (dry)
(measured on Zytel® 70G35HSLX BK357)



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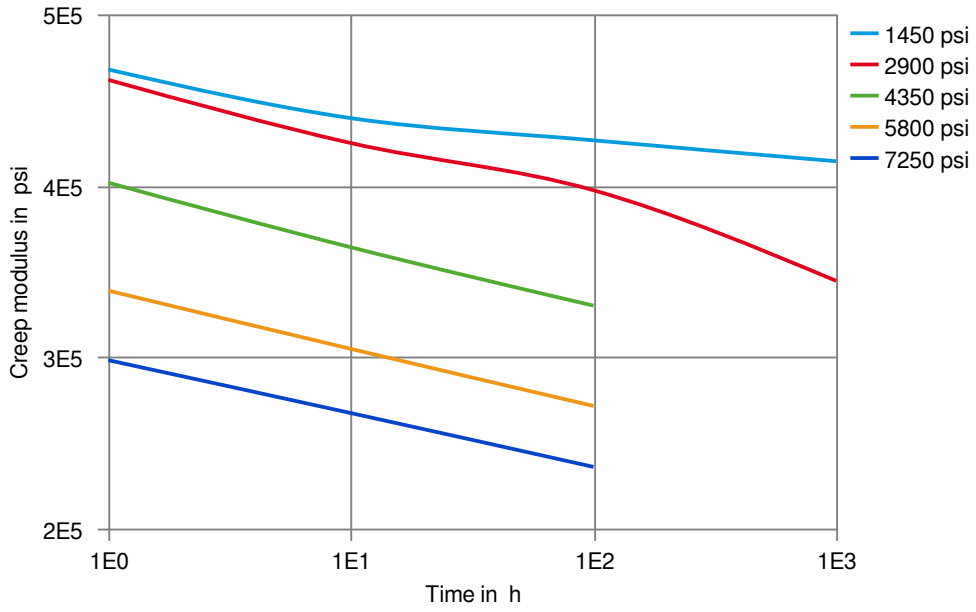
Stress-strain (isochronous) °F (dry)
(measured on Zytel® 70G35HSLX BK357)



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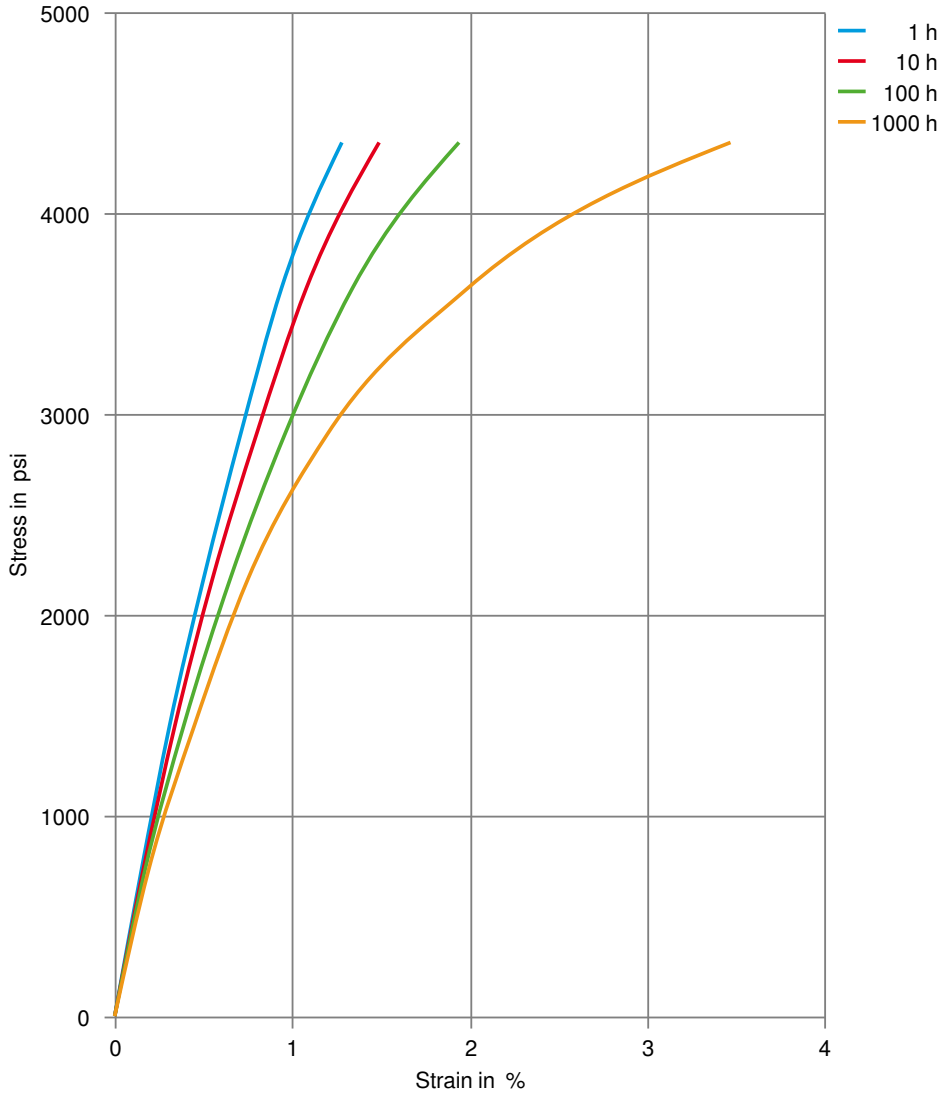
Creep modulus-time °F (dry)
(measured on Zytel® 70G35HSLX BK357)



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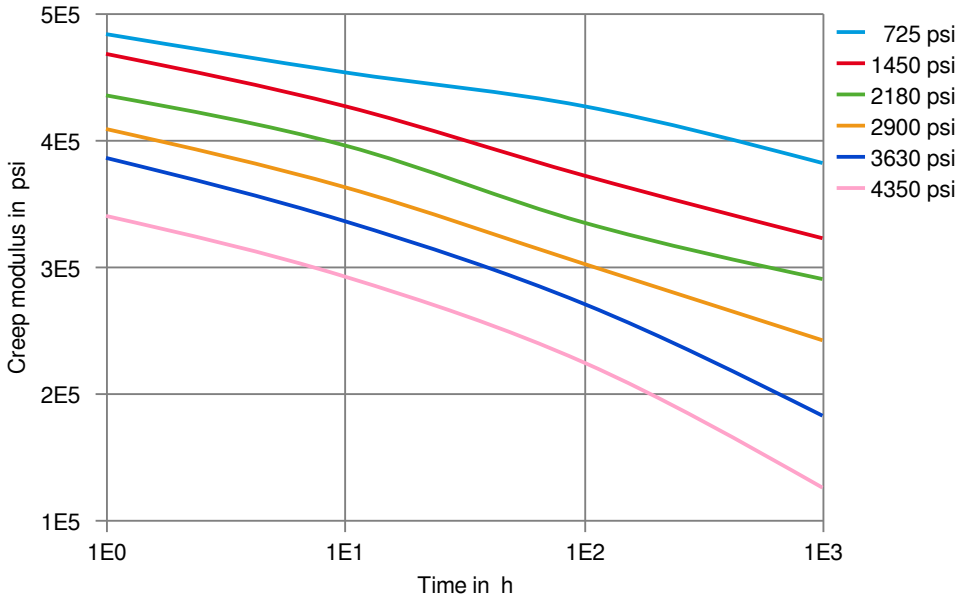
Stress-strain (isochronous) 392 °F (dry)



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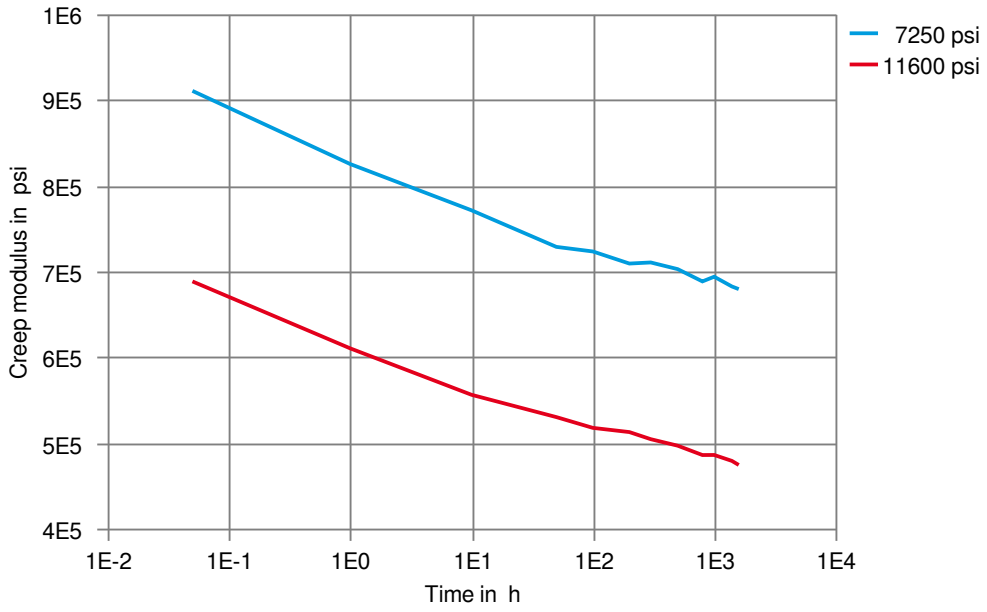
Creep modulus-time 392°F (dry)



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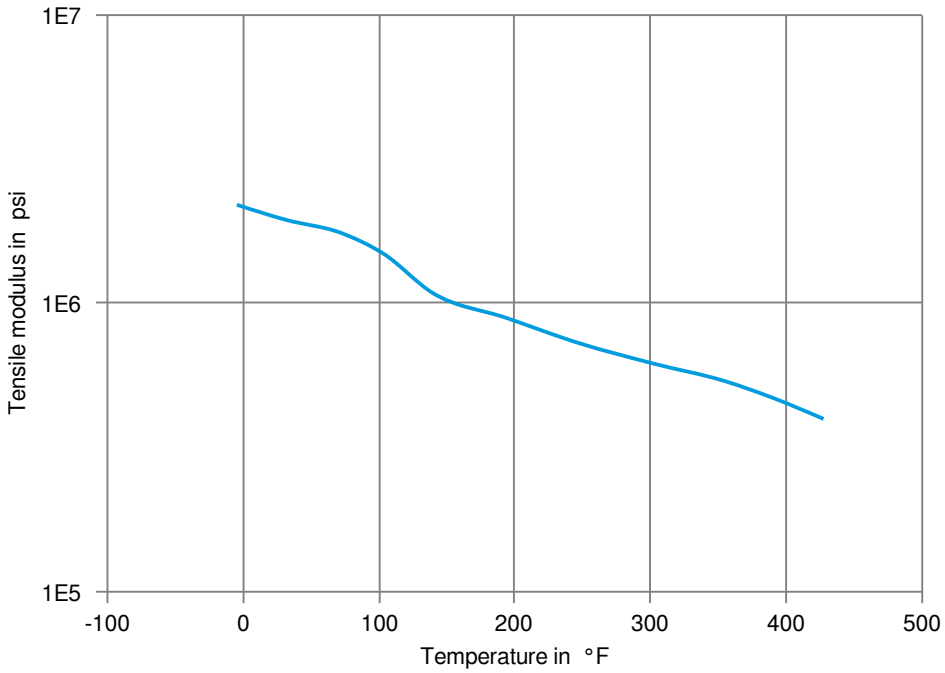
Creep modulus-time 73.4 °F (cond.)



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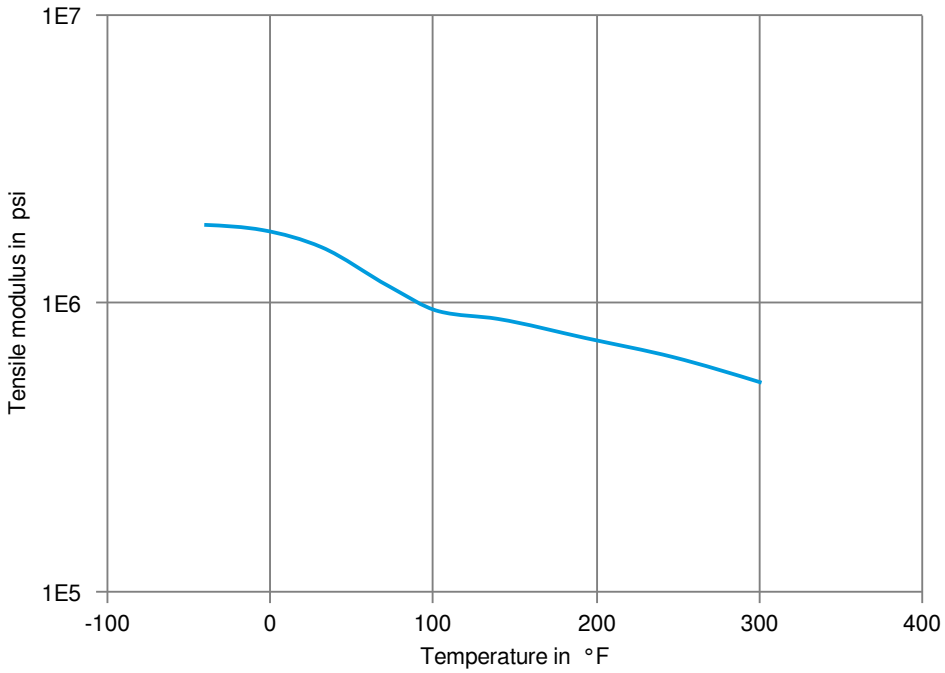
Tensile modulus-temperature (dry)



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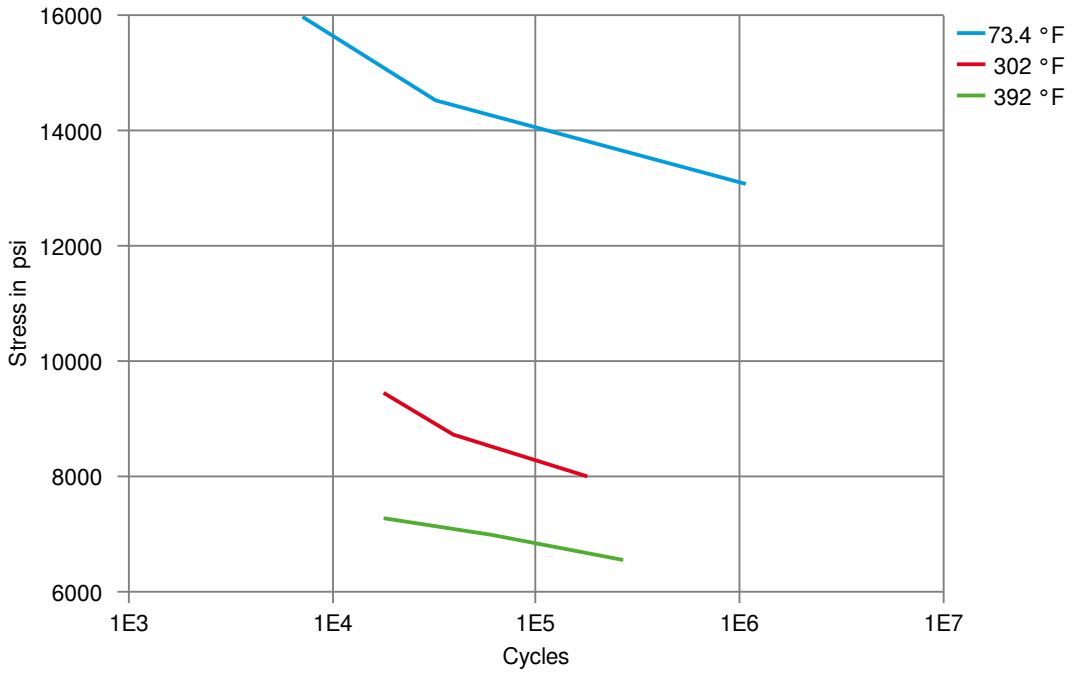
Tensile modulus-temperature (cond.)



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Tensile Fatigue, 10Hz, R=0.1 @ in (dry)



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Chemical Media Resistance

Acids

- ✔ Acetic Acid (5% by mass), 23°C
- ✔ Citric Acid solution (10% by mass), 23°C
- ✔ Lactic Acid (10% by mass), 23°C
- ✘ Hydrochloric Acid (36% by mass), 23°C
- ✘ Nitric Acid (40% by mass), 23°C
- ✘ Sulfuric Acid (38% by mass), 23°C
- ✘ Sulfuric Acid (5% by mass), 23°C
- ✘ Chromic Acid solution (40% by mass), 23°C

Bases

- ✘ Sodium Hydroxide solution (35% by mass), 23°C
- ✔ Sodium Hydroxide solution (1% by mass), 23°C
- ✔ Ammonium Hydroxide solution (10% by mass), 23°C

Alcohols

- ✔ Isopropyl alcohol, 23°C
- ✔ Methanol, 23°C
- ✔ Ethanol, 23°C

Hydrocarbons

- ✔ n-Hexane, 23°C
- ✔ Toluene, 23°C
- ✔ iso-Octane, 23°C

Ketones

- ✔ Acetone, 23°C

Ethers

- ✔ Diethyl ether, 23°C

Mineral oils

- ✔ SAE 10W40 multigrade motor oil, 23°C
- ✔ SAE 10W40 multigrade motor oil, 130°C
- ✔ SAE 80/90 hypoid-gear oil, 130°C
- ✔ Insulating Oil, 23°C
- ✔ Motor oil OS206 304 Ref.Eng.Oil, ISP, 135°C
- ✔ Automatic hypoid-gear oil Shell Donax TX, 135°C
- ✔ Hydraulic oil Pentosin CHF 202, 125°C

Standard Fuels

- ✔ ISO 1817 Liquid 1 - E5, 60°C
- ✔ ISO 1817 Liquid 2 - M15E4, 60°C
- ✔ ISO 1817 Liquid 3 - M3E7, 60°C
- ✔ ISO 1817 Liquid 4 - M15, 60°C
- ✔ Standard fuel without alcohol (pref. ISO 1817 Liquid C), 23°C
- ✔ Standard fuel with alcohol (pref. ISO 1817 Liquid 4), 23°C
- ✔ Diesel fuel (pref. ISO 1817 Liquid F), 23°C
- ✔ Diesel fuel (pref. ISO 1817 Liquid F), 90°C
- ✘ Diesel fuel (pref. ISO 1817 Liquid F), >90°C
- ✘ Diesel EN 590, 100°C

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Salt solutions

- ✔ Sodium Chloride solution (10% by mass), 23°C
- ✘ Sodium Hypochlorite solution (10% by mass), 23°C
- ✔ Sodium Carbonate solution (20% by mass), 23°C
- ✔ Sodium Carbonate solution (2% by mass), 23°C
- ✘ Zinc Chloride solution (50% by mass), 23°C

Other

- ✔ Ethyl Acetate, 23°C
- ✘ Hydrogen peroxide, 23°C
- ✔ DOT No. 4 Brake fluid, 130°C
- ✔ DOT No. 4 Brake fluid, 120°C
- ✔ Ethylene Glycol (50% by mass) in water, 108°C
- ✔ 1% nonylphenoxy-polyethyleneoxy ethanol in water, 23°C
- ✔ 50% Oleic acid + 50% Olive Oil, 23°C
- ✔ Water, 23°C
- ✘ Water, 90°C
- ✘ Phenol solution (5% by mass), 23°C
- ✘ Coolant Glysantin G48, 1:1 in water, 125°C

Symbols used:

✔ possibly resistant
Defined as: Supplier has sufficient indication that contact with chemical can be potentially accepted under the intended use conditions and expected service life. Criteria for assessment have to be indicated (e.g. surface aspect, volume change, property change).

✘ not recommended - see explanation
Defined as: Not recommended for general use. However, short-term exposure under certain restricted conditions could be acceptable (e.g. fast cleaning with thorough rinsing, spills, wiping, vapor exposure).

Revised: 2026-08-12 Source: Celanese Materials Database

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