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Zytel® HTNFR52G30GWNH (PRELIMINARY)

HIGH PERFORMANCE POLYAMIDE RESIN

Zytel® HTNFR52G30GWNH is a 30% glass reinforced, flame retardant high performance polyamide resin with improved Glow Wire performance. It is also a PPA resin and it uses a non-halogenated flame retardant.

Product information

Resin Identification	PA6T/66-GF30FR(40)	ISO 1043
Part Marking Code	>PA6T/66-GF30FR(40)<	ISO 11469
Part Marking Code	>PPA-GF30FR<	SAE J1344
ISO designation	ISO 16396-PA6T/66,GF30 FR(40),M1F1GN,S10-110	

Typical mechanical properties

	dry/cond.		
Tensile modulus	11500 / 11000	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	140 / 110	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.9 / 2.1	%	ISO 527-1/-2
Flexural modulus	11000 / -	MPa	ISO 178
Flexural strength	200 / -	MPa	ISO 178
Charpy impact strength, 23°C	35 / 30	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	30 / 30	kJ/m²	ISO 179/1eU
Charpy impact strength, -40°C	30 / 30	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	6 / 5.5	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	5.5 / 5	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -40°C	5 / 5	kJ/m²	ISO 179/1eA
Poisson's ratio	0.33 / 0.34		

Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	310 / *	°C	ISO 11357-1/-3
Melting temperature, first heat	310 / *	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	90 / 45	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	276 / *	°C	ISO 75-1/-2
Temperature of deflection under load, 8 MPa	263 / *	°C	ISO 75-1/-2
Ball pressure test	260 / -	°C	IEC 60695-10-2

Flammability

	dry/cond.		
Burning Behav. at 1.5mm nom. thickn.	V-0 / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	IEC 60695-11-10
UL recognition	yes / *		UL 94
Burning Behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.4 / *	mm	IEC 60695-11-10
UL recognition	yes / *		UL 94
Glow Wire Flammability Index, 0.4mm	960 / -	°C	IEC 60695-2-12
Glow Wire Flammability Index, 1.5mm	960 / -	°C	IEC 60695-2-12
Glow Wire Flammability Index, 3.0mm	960 / -	°C	IEC 60695-2-12
Glow Wire Ignition Temperature, 0.4mm	775 / -	°C	IEC 60695-2-12
Glow Wire Ignition Temperature, 1.5mm	850 / -	°C	IEC 60695-2-13
Glow Wire Ignition Temperature, 3.0mm	875 / -	°C	IEC 60695-2-13

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Electrical properties

	dry/cond.		
Comparative tracking index	-/600		IEC 60112

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.2/*	%	Sim. to ISO 62
Water absorption, 2mm	3.7/*	%	Sim. to ISO 62
Density	1460/-	kg/m³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	100	°C
Drying Time, Dehumidified Dryer	6 - 8	h
Processing Moisture Content	≤0.1	%
Min. melt temperature	320	°C
Max. melt temperature	325	°C
Min. mould temperature	90	°C
Max. mould temperature	130	°C

Characteristics

Processing	Injection Moulding
Additives	Flame retardant, Non-halogenated/Red phosphorous free flame retardant
Special characteristics	Flame retardant, Lead-free soldering resistant

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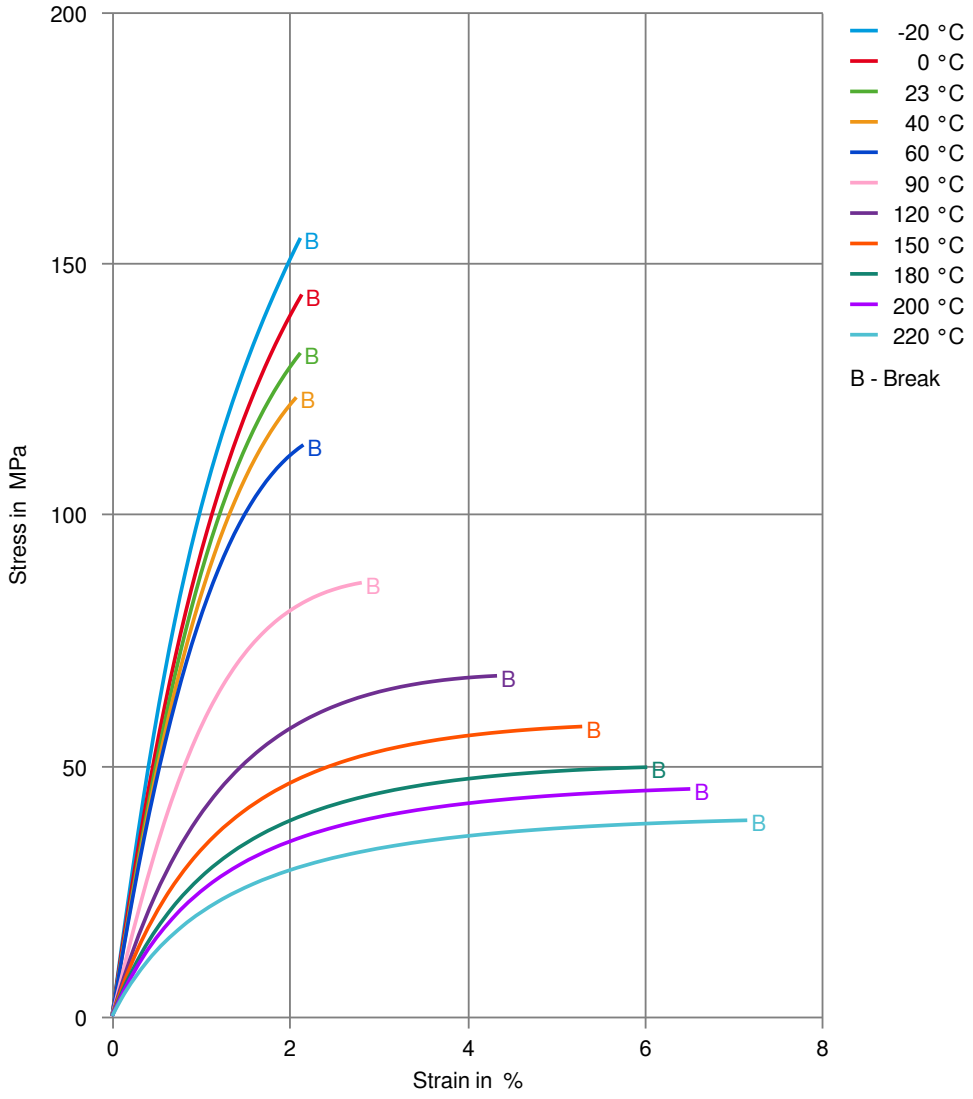
Stress-strain (dry)



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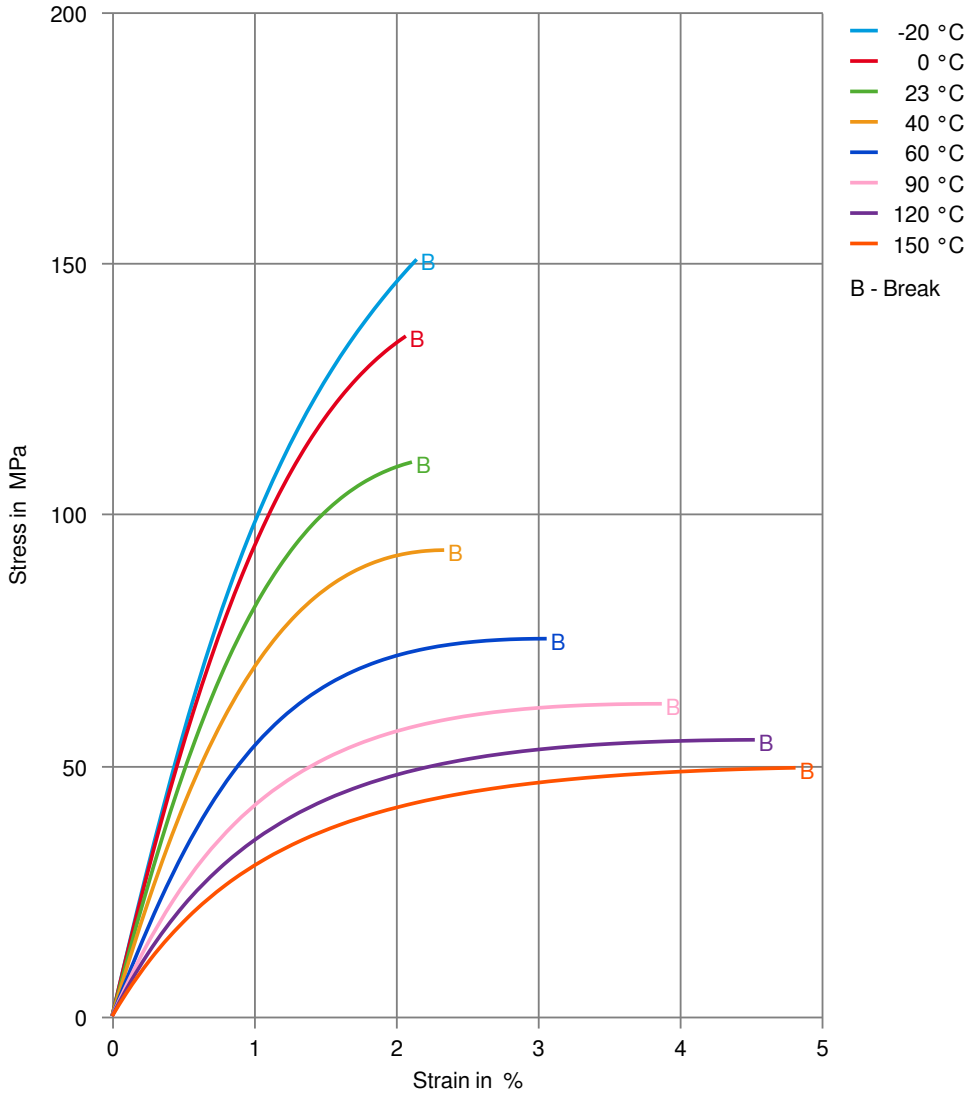
Stress-strain (cond.)



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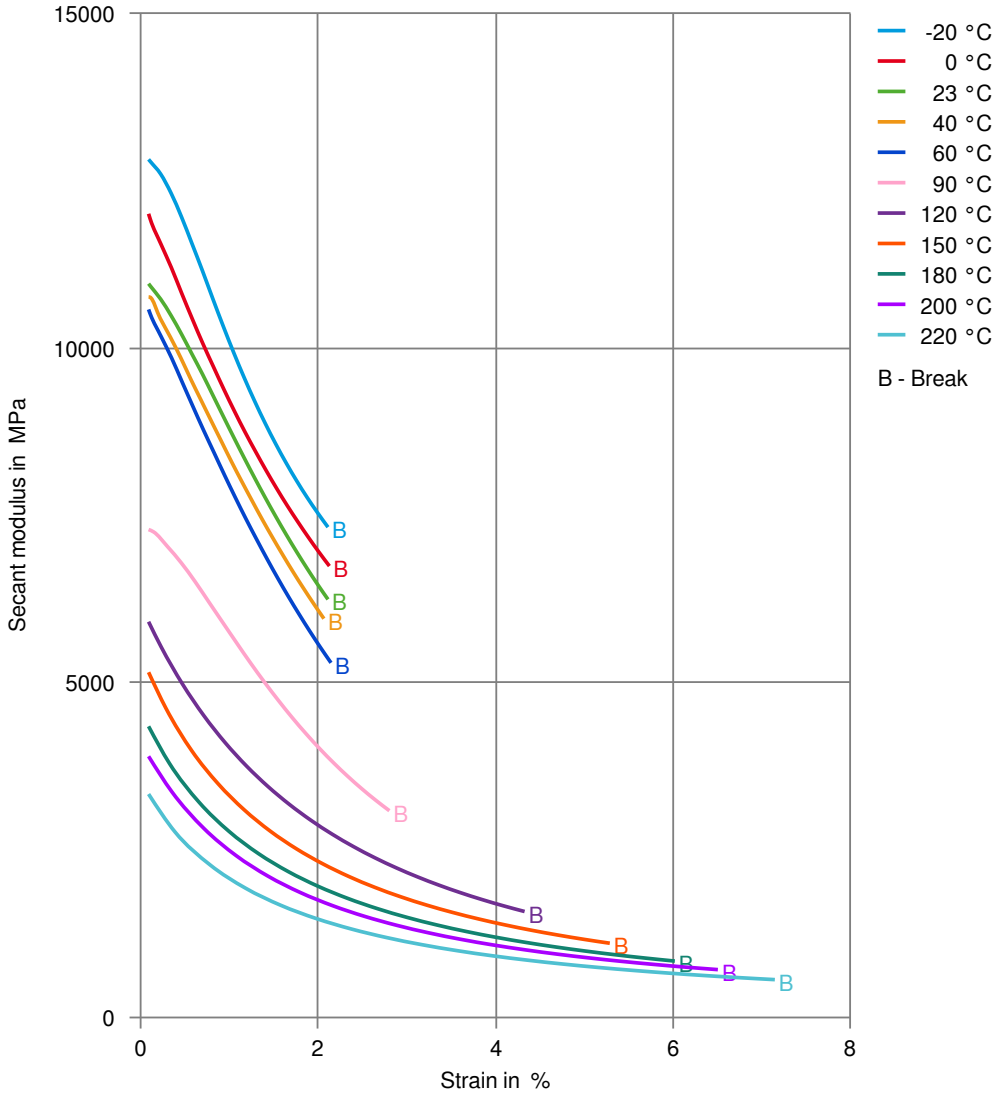
Secant modulus-strain (dry)



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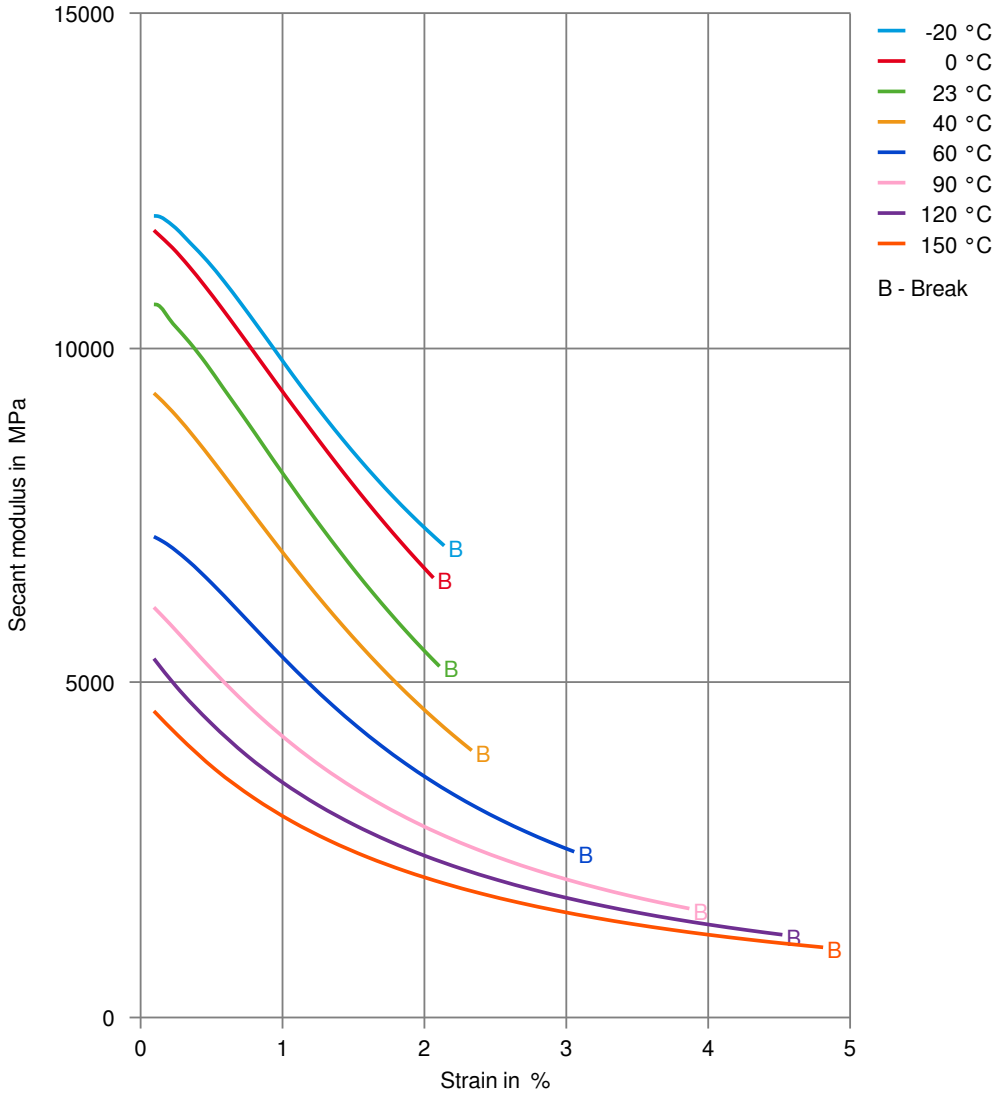
Secant modulus-strain (cond.)



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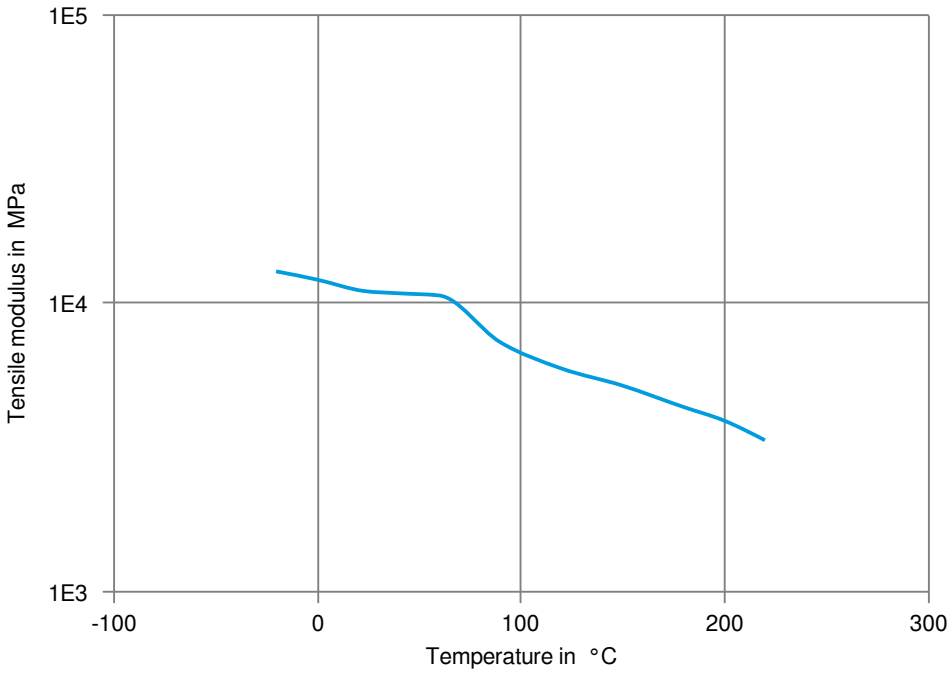
Tensile modulus-temperature (dry)



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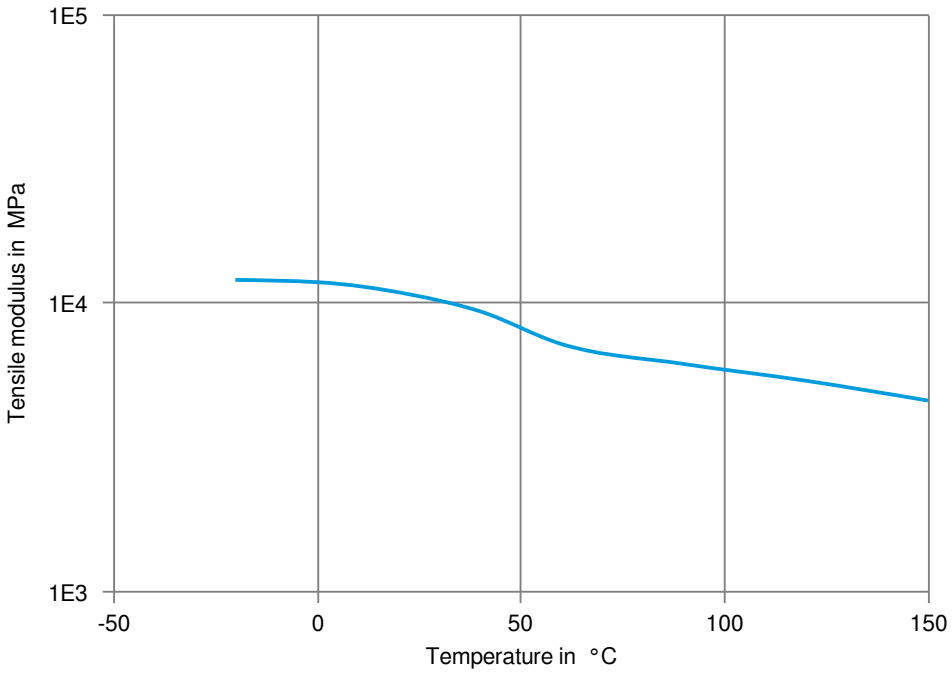
Tensile modulus-temperature (cond.)



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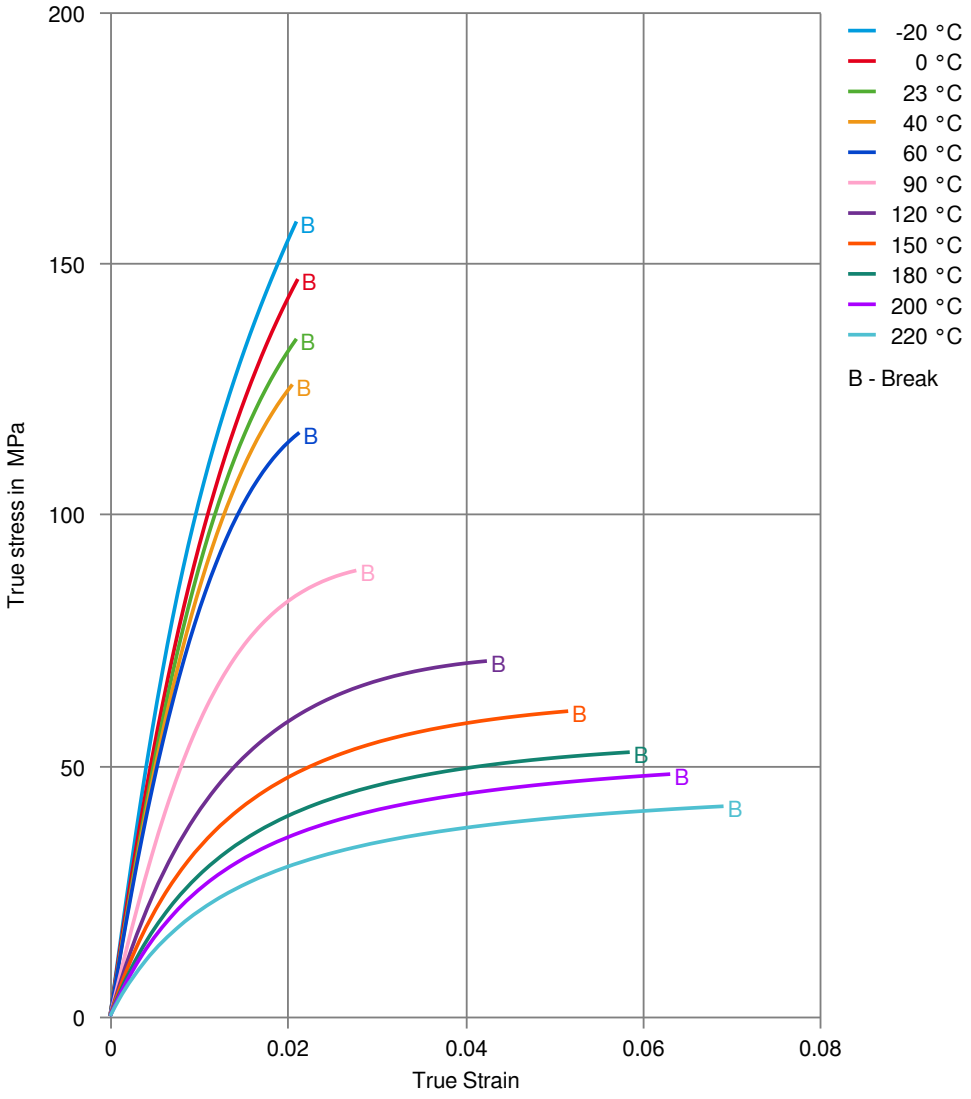
True stress-strain (dry)



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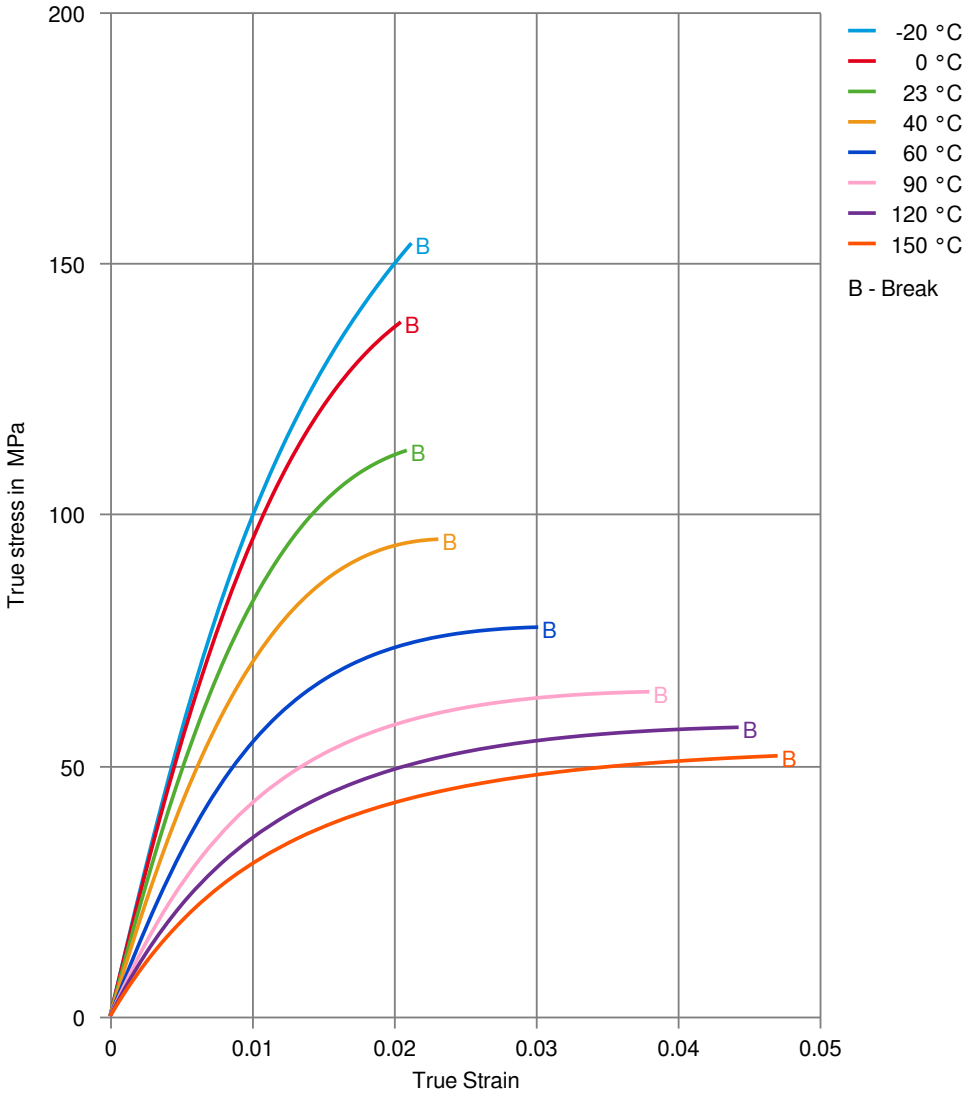
True stress-strain (cond.)



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