Celanese
The chemistry inside innovation™

CELANYL® A3 HHR3 GF30 BK 9005

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Designed for Automotive industry, specifically to withstand contact with coolant and oils in extreme thermal conditions.

Product information

Resin Identification	PA66-GF30	ISO 1043
Part Marking Code	>PA66-GF30<	ISO 11469

Rheological properties

Moulding shrinkage range, parallel	0.3 - 0.6	%	ISO 294-4, 2577
Moulding shrinkage range, normal	0.6 - 0.9	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	10000 / 7000	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	190 / 135	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	3.2 / 6	%	ISO 527-1/-2
Flexural modulus	10000 / 7400	MPa	ISO 178
Flexural strength	280 / 190	MPa	ISO 178
Charpy impact strength, 23°C	85 / 90	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	12 / 17	kJ/m²	ISO 179/1eA
Izod notched impact strength, 23°C	13 / -	kJ/m²	ISO 180/1A
Poisson's ratio	0.413 / -[C]		

[C]: Calculated

Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	262 / *	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	250 / *	°C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	23.6 / *	E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	91.2 / *	E-6/K	ISO 11359-1/-2

Flammability

	dry/cond.		
Burning Behav. at 1.5mm nom. thickn.	HB / *	class	IEC 60695-11-10

Physical/Other properties

	dry/cond.		
Density	1360 / -	kg/m³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	80	°C
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	≤0.15	%
Melt Temperature Optimum	295	°C
Min. melt temperature	285	°C
Max. melt temperature	305	°C
Screw tangential speed	≤0.2	m/s
Mold Temperature Optimum	100	°C
Min. mould temperature	70	°C

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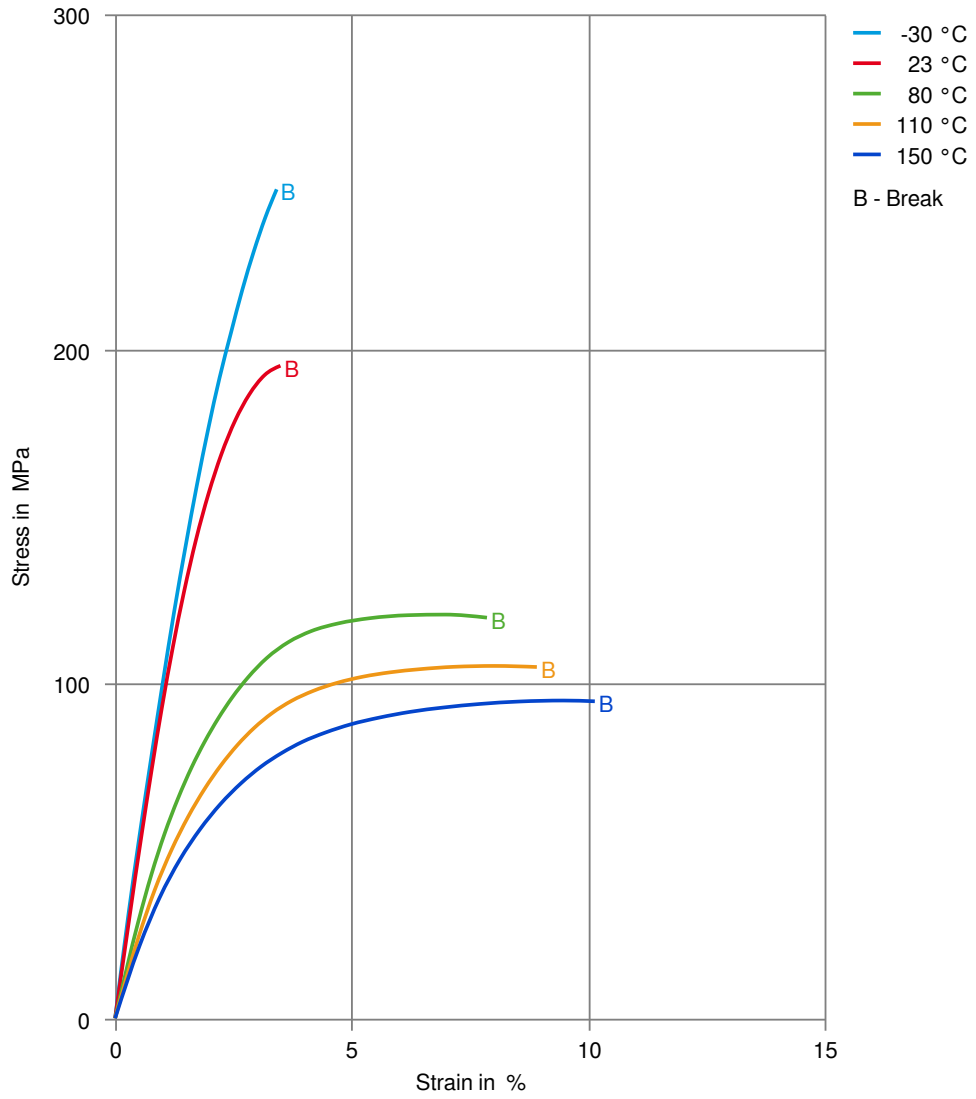
Max. mould temperature	120 °C

Characteristics

Processing	Injection Moulding
Delivery form	Granules
Special characteristics	Heat stabilised or stable to heat, Hydrolysis resistant, Chemical resistant

Stress-strain (dry)



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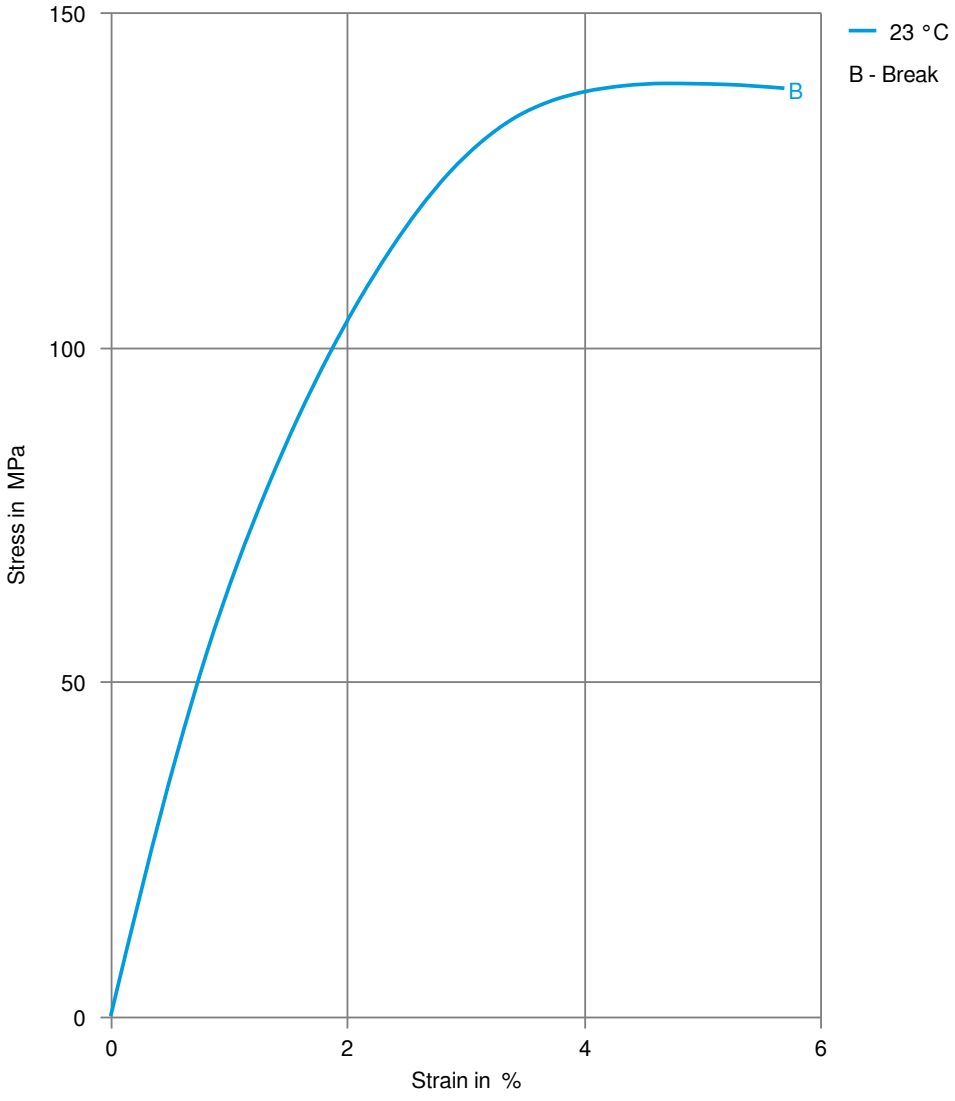
Stress-strain (cond.)



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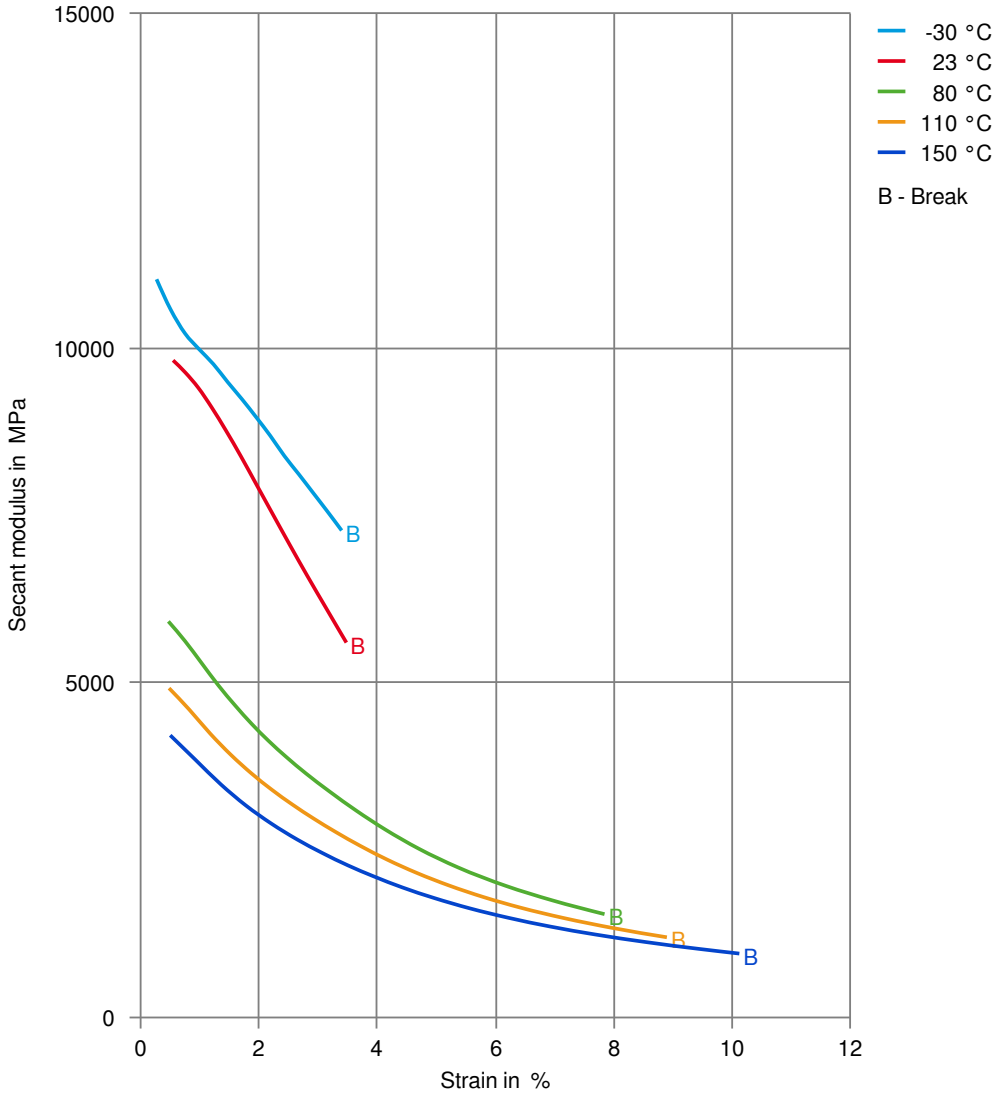
Secant modulus-strain (dry)



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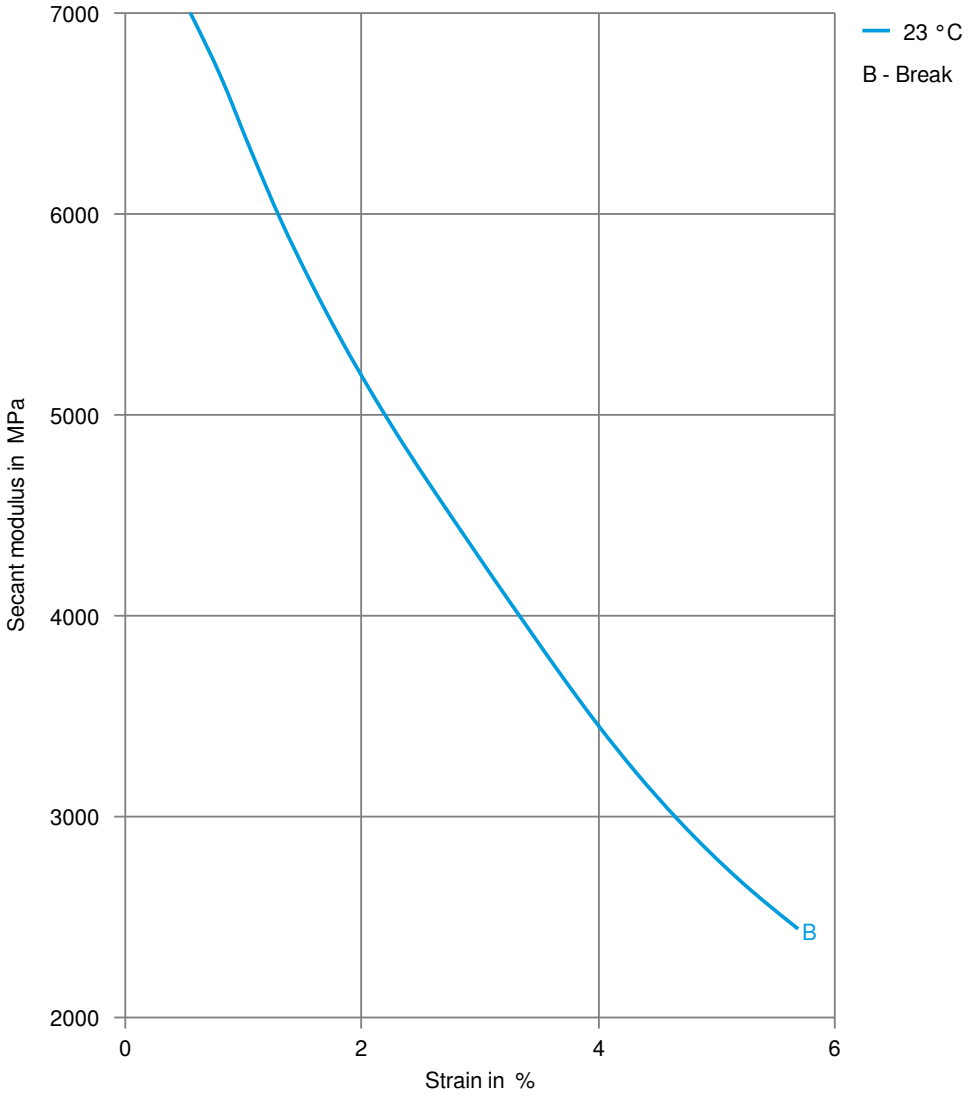
Secant modulus-strain (cond.)



Revised: 2024-08-16 Source: Celanese Materials Database