Celanese
The chemistry inside innovation™

CELANYL® A3 HH GF50 BK 9005/AG

CELANYL®

Grade for technical uses, designed for Automotive parts under the hood. High stiffness and long term heat ageing resistance.

Product information

Resin Identification	PA66-GF50		ISO 1043
Part Marking Code	>PA66-GF50<		ISO 11469
Continuous Service Temperature	140	°C	IEC 60216-1

Rheological properties

	dry/cond.		
Melt volume-flow rate	15 / *	cm^3/10min	ISO 1133
Temperature	270 / *	°C	
Load	5 / *	kg	
Moulding shrinkage, parallel	0.2 / -	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.3 / -	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	17000 / 13000	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	230 / 170	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2 / 2.8	%	ISO 527-1/-2
Flexural modulus	15000 / -	MPa	ISO 178
Flexural strength	310 / -	MPa	ISO 178
Charpy impact strength, 23°C	65 / 70	kJ/m^2	ISO 179/1eU
Charpy notched impact strength, 23°C	13 / 15	kJ/m^2	ISO 179/1eA
Izod notched impact strength, 23°C	13 / -	kJ/m^2	ISO 180/1A
Poisson's ratio	0.33 / 0.33[C]		

[C]: Calculated

Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	265 / *	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	257 / *	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	260 / *	°C	ISO 75-1/-2

Flammability

	dry/cond.		
Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.8 / *	mm	IEC 60695-11-10
Glow Wire Flammability Index, 0.75mm	650 / -	°C	IEC 60695-2-12
Glow Wire Flammability Index, 3.0mm	650 / -	°C	IEC 60695-2-12

Electrical properties

	dry/cond.		
Electric strength	22 / -	kV/mm	IEC 60243-1
Comparative tracking index	500 / -		IEC 60112

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Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.1 / *	%	Sim. to ISO 62
Water absorption, 2mm	3.5 / *	%	Sim. to ISO 62
Density	1570 / -	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
Max. mould temperature	120	°C

Characteristics

Processing	Injection Moulding
Delivery form	Granules
Special characteristics	Heat stabilised or stable to heat

Automotive

OEM	STANDARD	ADDITIONAL INFORMATION
VW Group	VW 50127	*Best Fitting Grade To PA66-10, Not Officially Approved
VW Group	VW 50133	*Best Fitting Grade To PA66-8-A, Not Officially Approved

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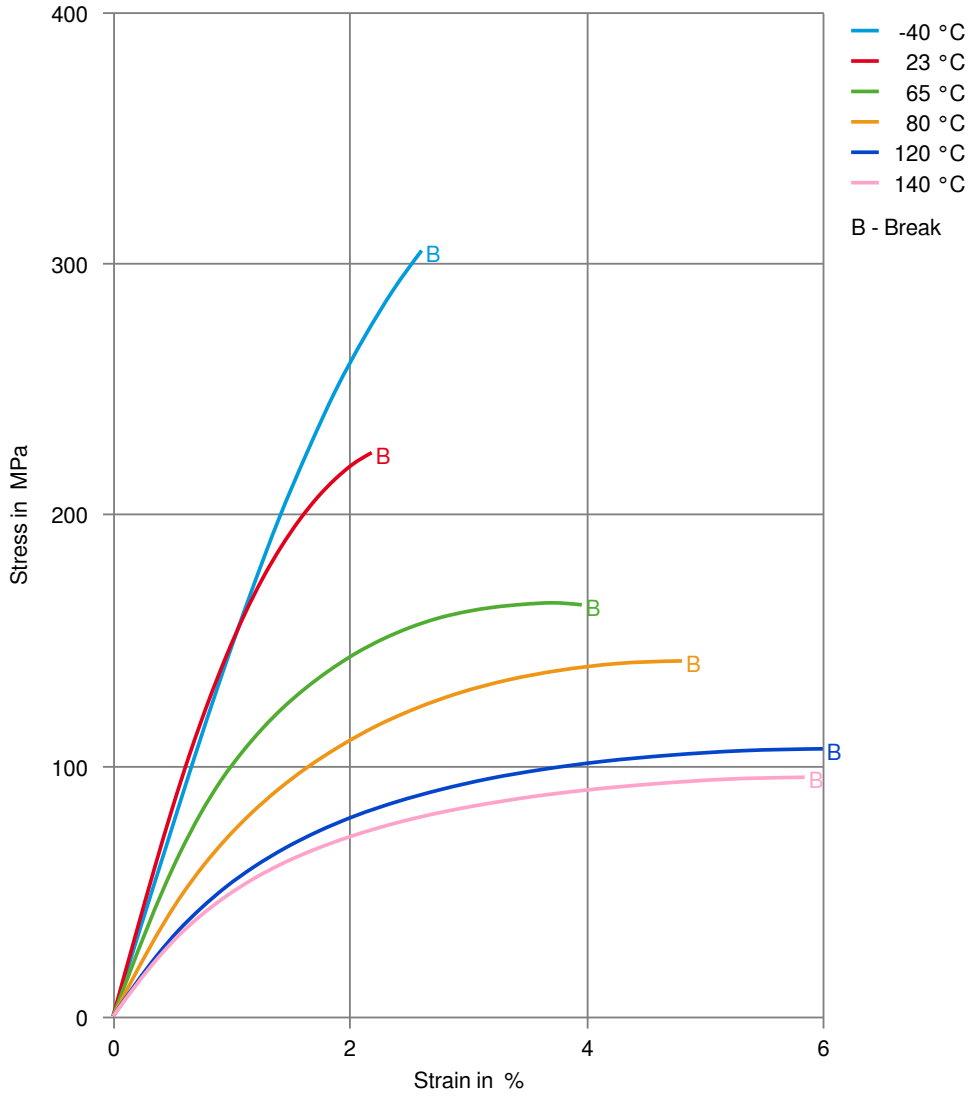
Stress-strain (dry)



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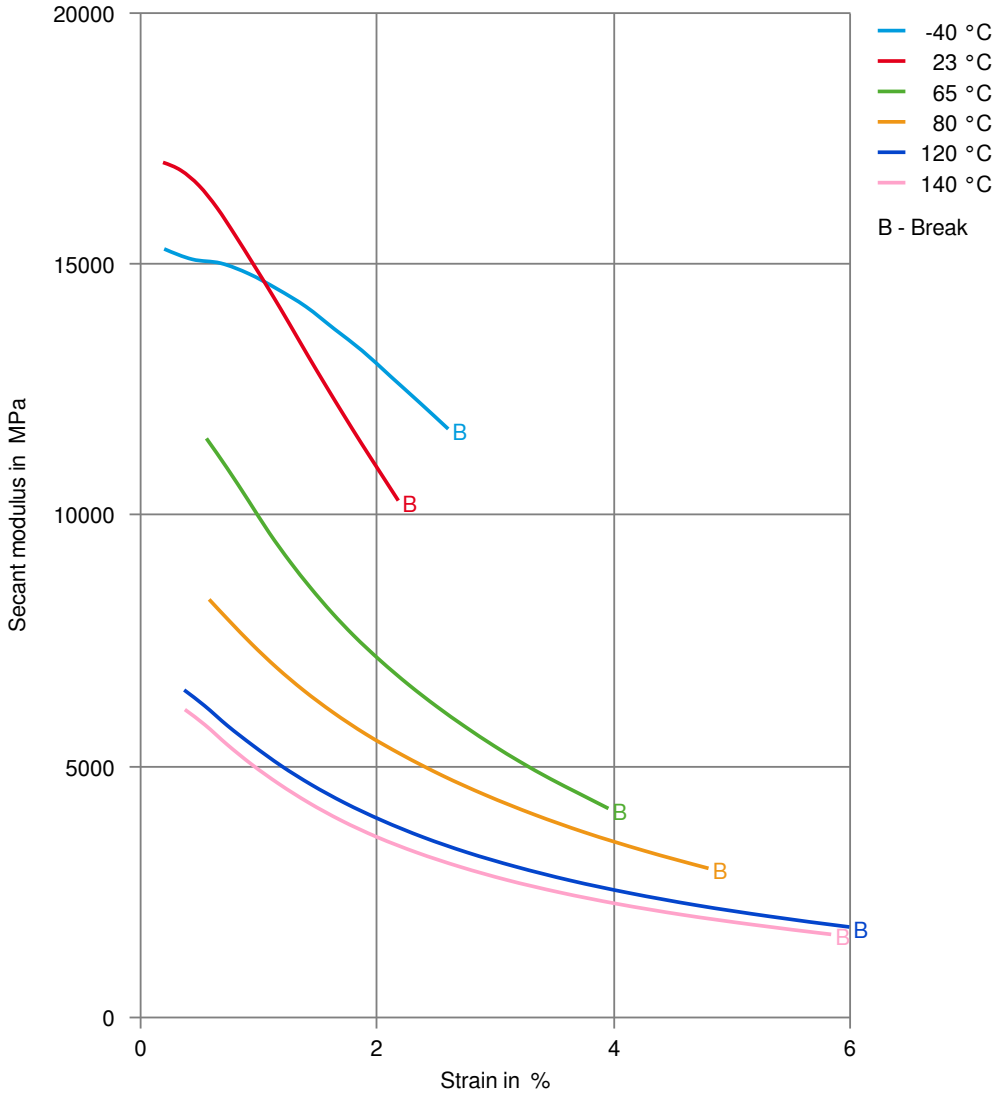
Secant modulus-strain (dry)



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