

CELANYL® A3 GF50 BK 9005/U

CELANYL®

General purpose grade for high mechanical performances.

Product information

Resin Identification	PA66-GF50	ISO 1043
Part Marking Code	>PA66-GF50<	ISO 11469
Continuous Service Temperature	90 °C	IEC 60216-1

Rheological properties

	dry/cond.		
Viscosity number	135 / *	cm ³ /g	ISO 307, 1628
Moulding shrinkage range, parallel	0.1 - 0.4	%	ISO 294-4, 2577
Moulding shrinkage range, normal	0.4 - 0.7	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	16000 / -	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	210 / -	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.5 / -	%	ISO 527-1/-2
Charpy impact strength, 23 °C	N / -	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23 °C	13 / -	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30 °C	11.5 / -	kJ/m ²	ISO 179/1eA
Ball indentation hardness, H 961/30	265 / -	MPa	ISO 2039-1
Poisson's ratio	0.33 / - ^[C]		

[C]: Calculated

Thermal properties

	dry/cond.		
Melting temperature, 10 °C/min	260 / *	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	245 / *	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	255 / *	°C	ISO 75-1/-2

Flammability

	dry/cond.		
Burning Behav. at 1.5mm nom. thickn.	HB / *	class	IEC 60695-11-10
Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.75 / *	mm	IEC 60695-11-10
UL recognition	yes / *		UL 94

Electrical properties

	dry/cond.		
Volume resistivity	1E13 / -	Ohm.m	IEC 62631-3-1
Surface resistivity	* / 1E12	Ohm	IEC 62631-3-2
Electric strength	22 / -	kV/mm	IEC 60243-1
Comparative tracking index	500 / -		IEC 60112

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	0.9 / *	%	Sim. to ISO 62
Water absorption, 2mm	4 / *	%	Sim. to ISO 62
Density	1570 / -	kg/m ³	ISO 1183

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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

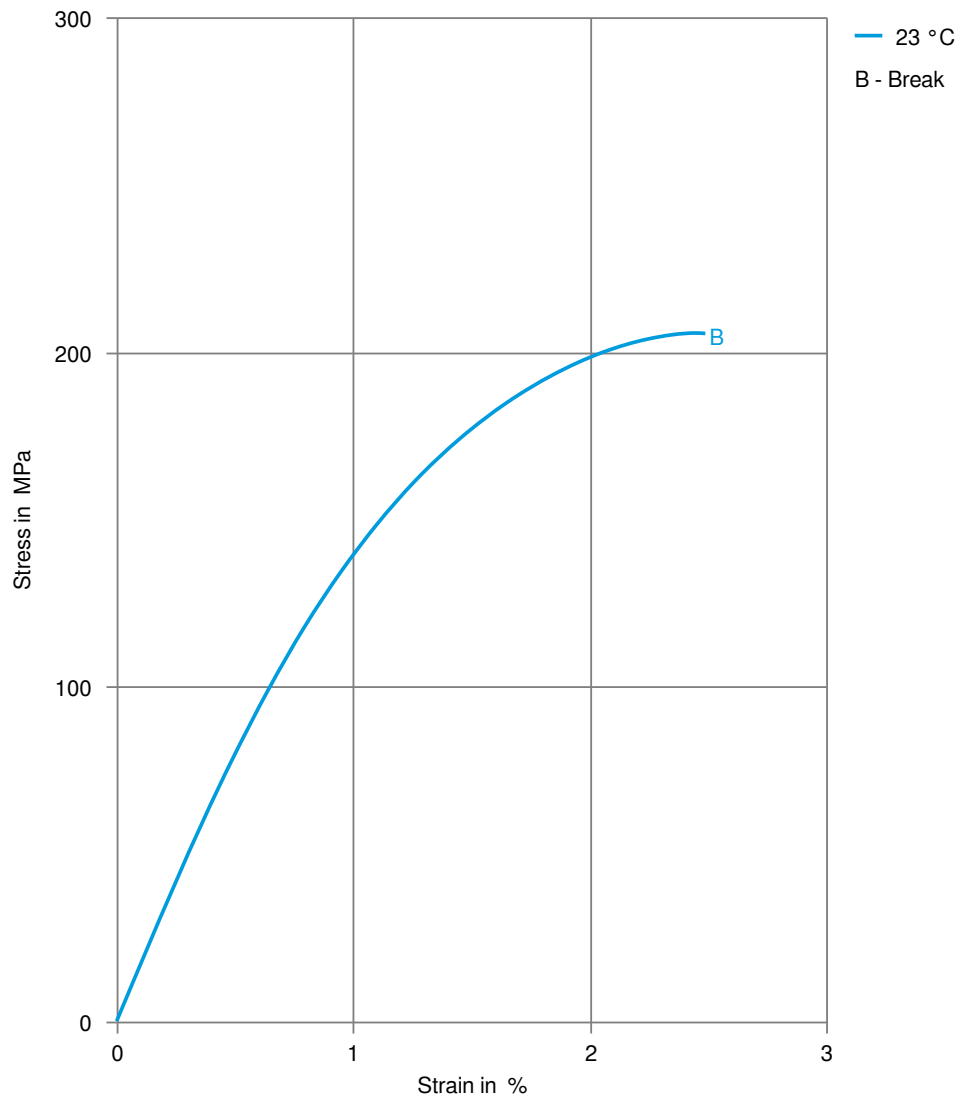
Characteristics

Processing	Injection Moulding
Delivery form	Granules
Special characteristics	High Flow

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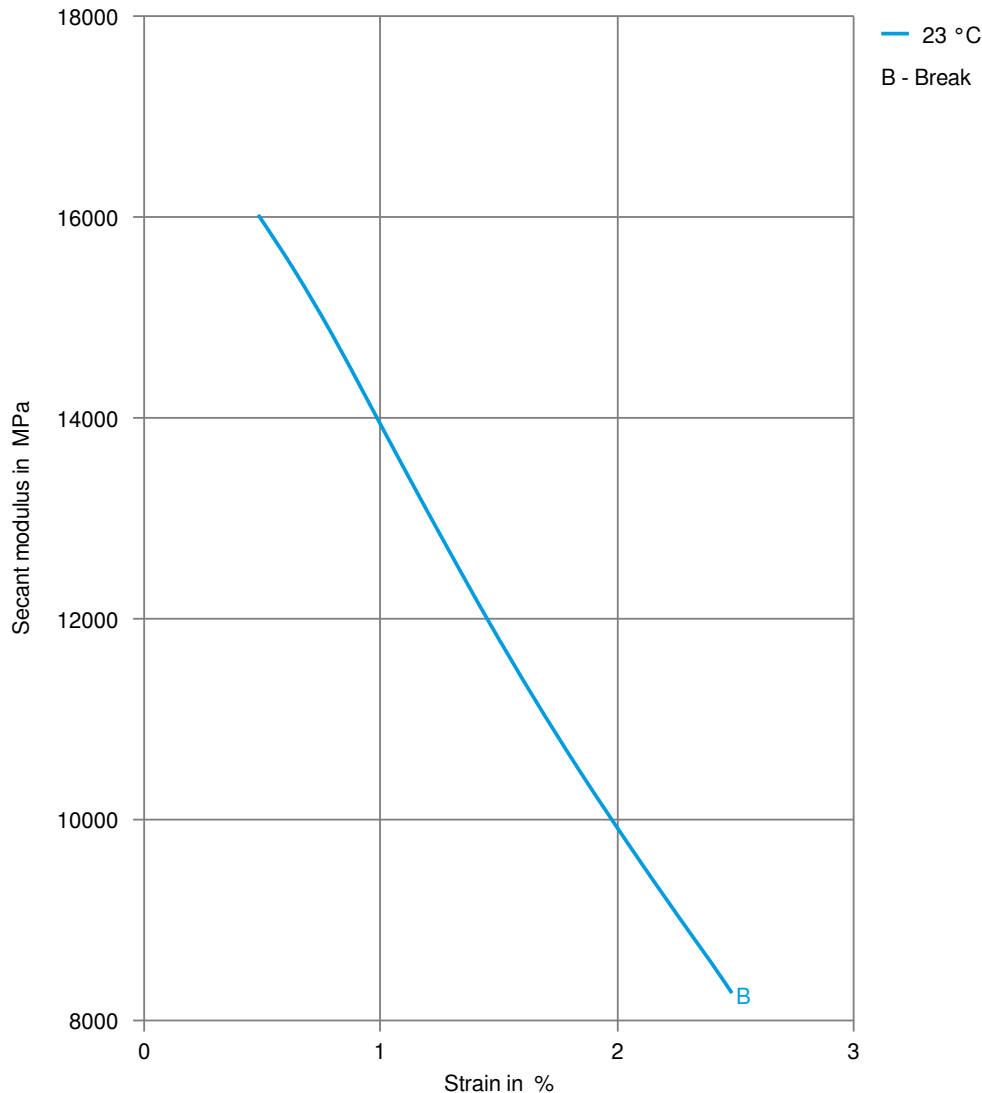
Stress-strain (dry)



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Secant modulus-strain (dry)



Printed: 2025-05-29

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Revised: 2025-02-14 Source: Celanese Materials Database

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