

CELANYL® B3 GF30 E BK 9005

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Product information

Resin Identification	PA6-GF30	ISO 1043
Part Marking Code	>PA6-GF30<	ISO 11469

Rheological properties

Moulding shrinkage range, parallel	0.2 - 0.6 %	ISO 294-4, 2577
Moulding shrinkage range, normal	0.6 - 1 %	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	9700 / 6000	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	165 / 100	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	3 / 4.5	%	ISO 527-1/-2
Flexural modulus	10000 / -	MPa	ISO 178
Flexural strength	250 / -	MPa	ISO 178
Charpy impact strength, 23°C	65 / -	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	50 / -	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	10 / -	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	8 / -	kJ/m ²	ISO 179/1eA
Poisson's ratio	0.34 / 0.35 ^[C]		
[C]: Calculated			

Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	225 / *	°C	ISO 11357-1/-3
Vicat softening temperature, 50°C/h 10N	215	°C	ISO 306
Coefficient of linear thermal expansion (CLTE), parallel	19 / *	E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	104 / *	E-6/K	ISO 11359-1/-2
Thermal conductivity, flow	0.46	W/(m K)	ISO 22007-2
Thermal conductivity, crossflow	0.44	W/(m K)	ISO 22007-2
Thermal conductivity, through plane	0.45	W/(m K)	ISO 22007-2
Effective thermal diffusivity, flow	2.4E-7	m ² /s	ISO 22007-4
Effective thermal diffusivity, crossflow	2.2E-7	m ² /s	ISO 22007-4
Effective thermal diffusivity, through plane	2.3E-7	m ² /s	ISO 22007-4

Flammability

	dry/cond.		
Glow Wire Flammability Index, 1.5mm	650 / -	°C	IEC 60695-2-12
Glow Wire Ignition Temperature, 1.5mm	675 / -	°C	IEC 60695-2-13

Electrical properties

	dry/cond.		
Volume resistivity	6.4E12 / -	Ohm.m	IEC 62631-3-1
Surface resistivity	* / 1.1E14	Ohm	IEC 62631-3-2
Comparative tracking index, 100 drops	600		IEC 60112

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Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.8 / *	%	Sim. to ISO 62
Water absorption, 2mm	6.3 / *	%	Sim. to ISO 62
Density	1360 / -	kg/m ³	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	260 °C
Min. melt temperature	240 °C
Max. melt temperature	290 °C
Screw tangential speed	≤0.2 m/s
Mold Temperature Optimum	80 °C
Min. mould temperature	60 °C
Max. mould temperature	120 °C

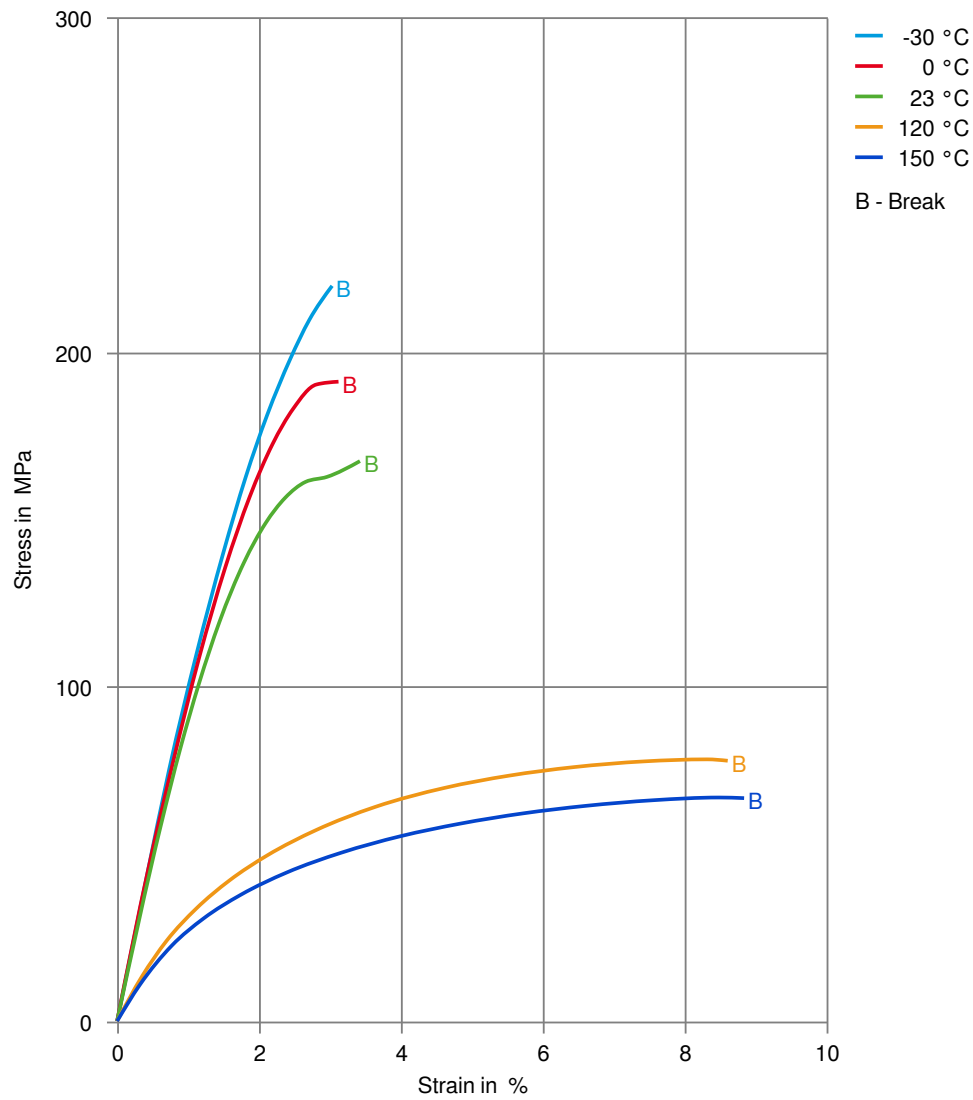
Characteristics

Processing	Injection Moulding
Delivery form	Granules
Additives	Low halide content
Special characteristics	Heat stabilised or stable to heat, Laser Markable, High Flow

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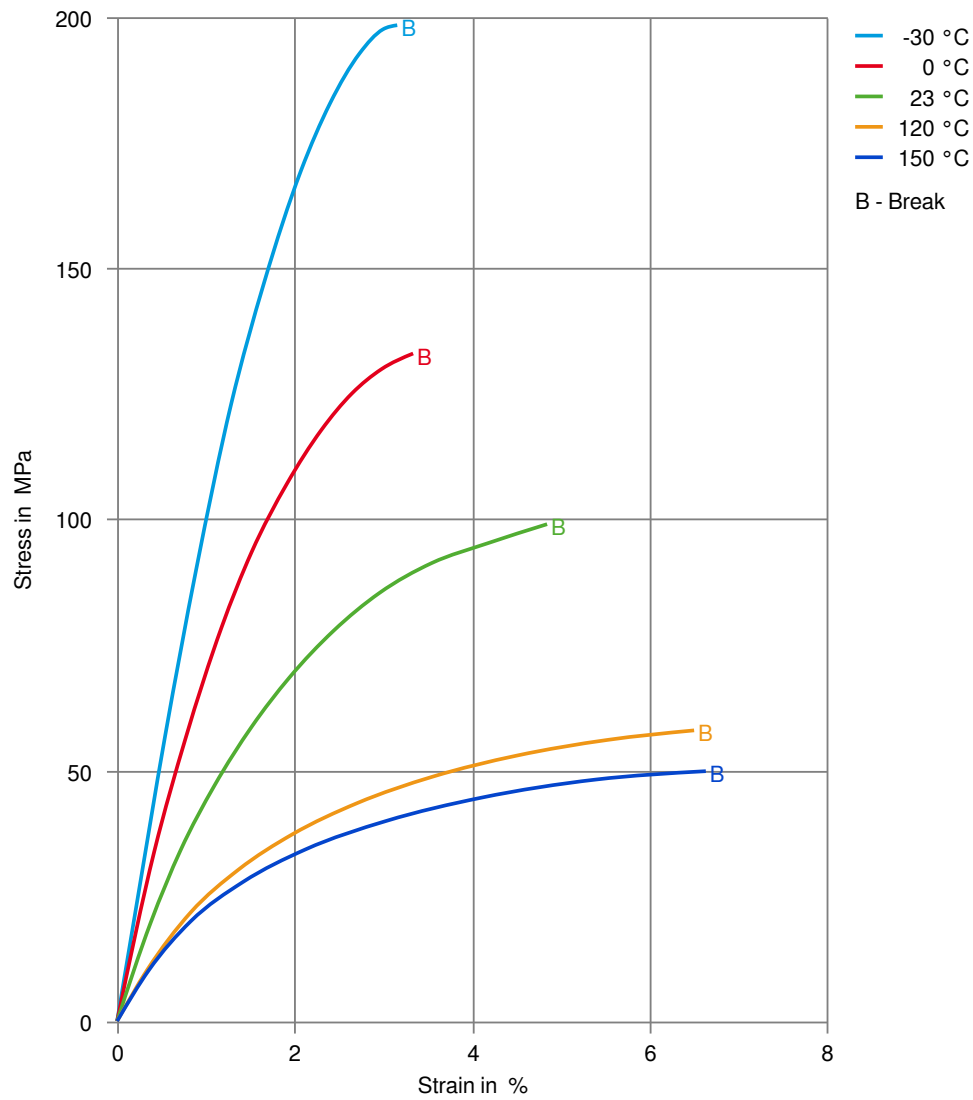
Stress-strain (dry)



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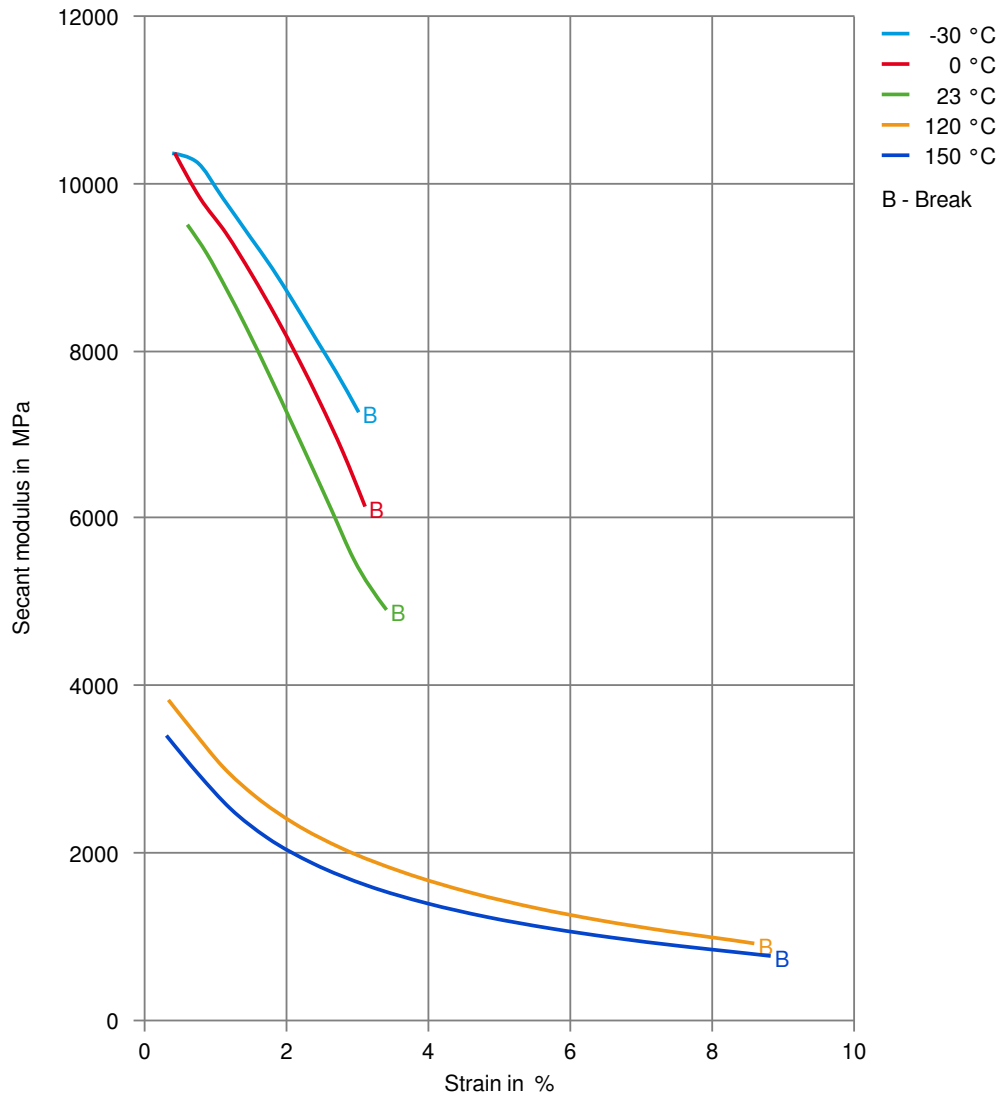
Stress-strain (cond.)



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Secant modulus-strain (dry)



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Secant modulus-strain (cond.)

