Celanese
The chemistry inside innovation™

CELANYL® XS3 GF50 NC 1102/J

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Compound designed for parts with high mechanical requirements, typically used to replace metal due to the high stiffness and strength, stable after conditioning. It shows better creep behavior and dimensional stability vs. an equivalent PA66 grade, with lower warpage and excellent surface finish.

Product information

Resin Identification	PA*-GF50		ISO 1043
Part Marking Code	>PA*-GF50<		ISO 11469
Continuous Service Temperature	120	°C	IEC 60216-1

Rheological properties

Moulding shrinkage range, parallel	0.1 - 0.3	%	ISO 294-4, 2577
Moulding shrinkage range, normal	0.3 - 0.5	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	16500 / 15500	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	245 / 210	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.8 / 3	%	ISO 527-1/-2
Flexural modulus	16000 / 14000	MPa	ISO 178
Flexural strength	380 / 300	MPa	ISO 178
Charpy impact strength, 23°C	100 / 95	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	100 / -	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	15.5 / 15	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	15 / -	kJ/m²	ISO 179/1eA
Izod notched impact strength, 23°C	14 / 14	kJ/m²	ISO 180/1A
Poisson's ratio	0.402 / -		

Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	260 / *	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	235 / *	°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	0.45 / *	mm	IEC 60695-11-10
UL recognition	yes / *		UL 94

Electrical properties

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

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1 / *	%	Sim. to ISO 62
Water absorption, 2mm	3.5 / *	%	Sim. to ISO 62
Density	1580 / -	kg/m³	ISO 1183

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Injection

Drying Recommended	yes	
Drying Temperature	80	°C
Drying Time, Dehumidified Dryer	4 - 6	h
Processing Moisture Content	≤0.1	%
Melt Temperature Optimum	290	°C
Min. melt temperature	270	°C
Max. melt temperature	305	°C
Screw tangential speed	≤0.2	m/s
Mold Temperature Optimum	80	°C
Min. mould temperature	60	°C
Max. mould temperature	100	°C

Characteristics

Processing	Injection Moulding
Delivery form	Granules
Special characteristics	Heat stabilised or stable to heat, High Gloss, Low Warpage, Improved creep