Celanese
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CELANYL® 70G30HHC BLK2 (PRELIMINARY)

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Common features of CELANYL® nylon resin include mechanical and physical properties such as high mechanical strength, excellent balance of stiffness and toughness, good high temperature performance, good electrical and flammability properties, good abrasion and chemical resistance. In addition, CELANYL® nylon resins are available in different modified and reinforced grades to create a wide range of products with tailored properties for specific processes and end-uses. CELANYL® nylon resin, including most flame retardant grades, offer the ability to be coloured.

The good melt stability of CELANYL® nylon resin normally enables the recycling of properly handled production waste. If recycling is not possible, we recommend, as the preferred option, incineration with energy recovery (-31kJ/g of base polymer) in appropriately equipped installations. For disposal, local regulations have to be observed.

CELANYL® nylon resin typically is used in demanding applications in the automotive, furniture, domestic appliances, sporting goods and construction industry.

CELANYL® 70G30HHC BLK2 is a 30% glass fiber reinforced, heat stabilized, polyamide 66 resin for injection molding combined with good laser marking performance.

Product information

Resin Identification	PA66-GF30	ISO 1043
Part Marking Code	>PA66-GF30<	ISO 11469
ISO designation	ISO 16396-PA66,GF30,M1CGHRW,S14-100	

Rheological properties

	dry/cond.		
Moulding shrinkage, parallel	0.3 / -	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.0 / -	%	ISO 294-4, 2577
Melt viscosity , @ 1000 sec-1, 280 °C	190 / *	Pa.s	ISO 11443

Typical mechanical properties

	dry/cond.		
Tensile modulus	10000 / 7000	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	190 / 125	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	3 / 5	%	ISO 527-1/-2
Flexural modulus	9900 / 7000	MPa	ISO 178
Flexural strength	280 / 200	MPa	ISO 178
Charpy impact strength, 23 °C	70 / -	kJ/m²	ISO 179/1eU
Charpy impact strength, -30 °C	70 / -	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23 °C	12 / -	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30 °C	10 / -	kJ/m²	ISO 179/1eA
Izod notched impact strength, 23 °C	10 / -	kJ/m²	ISO 180/1A
Izod notched impact strength, -30 °C	10.0 / -	kJ/m²	ISO 180/1A
Poisson's ratio	0.34 / -		

Thermal properties

	dry/cond.		
Melting temperature, 10 °C/min	262 / *	°C	ISO 11357-1/-3
Glass transition temperature, 10 °C/min	75 / -	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	247 / *	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	258 / *	°C	ISO 75-1/-2
Thermal conductivity, flow	0.36	W/(m K)	ISO 22007-2
Thermal conductivity of melt	0.21	W/(m K)	ISO 22007-2

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TGA curve	available		ISO 11359-1/-2

Flammability

	dry/cond.		
Burning Behav. at 1.5mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	IEC 60695-11-10
Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.75 / *	mm	IEC 60695-11-10
Oxygen index	24 / *	%	ISO 4589-1/-2
FMVSS Class	B		ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	37	mm/min	ISO 3795 (FMVSS 302)

Electrical properties

	dry/cond.		
Comparative tracking index	350 / -		IEC 60112

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.9 / *	%	Sim. to ISO 62
Water absorption, 2mm	6 / *	%	Sim. to ISO 62
Water absorption, Immersion 24h	1.3 / *	%	Sim. to ISO 62
Density	1370 / -	kg/m³	ISO 1183

VDA Properties

Odour	3.5	class	VDA 270

Injection

Drying Recommended	yes	
Drying Temperature	80	°C
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	≤0.2	%
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
Hold pressure range	50 - 100	MPa
Hold pressure time	3	s/mm
Ejection temperature	210	°C

Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Additives	Release agent
Special characteristics	Heat stabilised or stable to heat, Hydrolysis resistant

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Automotive

OEM	STANDARD
VW Group	VW 50133 PA66-6-A

Revised: 2025-05-26 Source: Celanese Materials Database