CELANYL® B3 J GF30 BK 9005/X

CELANYL®

Car industry, Household appliances, Electrical devices.

Product information

Resin Identification	PA6-I-GF30		ISO 1043
Part Marking Code	>PA6-I-GF30<		ISO 11469
Continuous Service Temperature	203	°F	IEC 60216-1

Rheological properties

	dry/cond.		
Viscosity number	3880 / *	in³/lb	ISO 307, 1628
Molding shrinkage range, parallel	0.2 - 0.5	%	ISO 294-4, 2577
Molding shrinkage range, normal	0.8 - 1.1	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	1.13E6 / -	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	16700 / -	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	3 / -	%	ISO 527-1/-2
Charpy impact strength, 23°C	30.9 / -	ftlb/in²	ISO 179/1eU
Charpy impact strength, -30°C	26.2 / -	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	5.71 / -	ftlb/in²	ISO 179/1eA

Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	437 / *	°F	ISO 11357-1/-3

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.5 / *	%	Sim. to ISO 62
Water absorption, 2mm	6.5 / *	%	Sim. to ISO 62
Density	0.0462 / -	lb/in³	ISO 1183

Characteristics

Processing	Injection Molding
Special characteristics	High impact or impact modified

Additional information

Injection molding

Preprocessing

PA materials, stocked in a moisture-proof packaging, can be processed without drying; however, it is always recomended drying the product that comes from a large package (e.g. Octabin). The moisture content suggested for the injection moulding process should be lower than 0.15%, according to the grade and to the moulded part characteristics. The materials containing flame retardants should have moisture content below 0.10%. Red phosphorous containing grades must always be dried below 0.08%. The drying time depends on the moisture content and the drying conditions. Typically 4-8 hours at 80-90C using dehumidified air (dew point of -20C) are suitable conditions for a starting moisture content of 0.20%-0.40%.

CELANYL® B3 J GF30 BK 9005/X

CELANYL®

Processing

The following conditions apply to a standard injection moulding process. Machine temperatures: barrel 265-290C (PA66), 235-270C (PA6), nozzle and hot runners up to 300C (up to 290C products with flame retardants). Mould temperatures: 60-80C, (80-100C highly reinforced grades). Back pressure: typically 5-10 bar (hydraulic pressure). Temperatures exceeding 300C and long residence time could lead to additives degradation and brittleness of the material. In case of gas generation in the melt, please verify moisture content and processing temperatures. Usage of regrind is possible depending on the moulded part characteristics. For further details, please refer to the document 'Instructions for injection moulding' or contact our technical support team.

Postprocessing

PA materials reach their final performance with a water content of about 1.5 to 3.5% by weight, depending on the type. This percentage corresponds to the point of equilibrium between the rates of absorption and desorption of moisture. After moulding, in favourable environmental conditions, a part can quickly absorbs moisture up to 0.5-1.0%, while the equilibrium will be reached during its life. A conditioning treatment can accelerate further the initial water absorption of the moulded parts. Conditioning is usually carried out in hot and humid environment (for example 50C, 100% RH), inside climatic chambers. Slight dimensional variations (increase in volume due to the water absorbed) must be taken into account, especially in unfilled grades. Post-treatments of parts may also include the annealing (60-80C in oven, up to four hours). This procedure can be useful to relax any internal stresses.

Revised: 2025-07-08 Source: Celanese Materials Database

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colorants or other additives may cause significant variations in data values. Properties of molded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Other than those products expressly identified as medical grade (including by MT® product designation or otherwise), Celanese's products are not intended for use in medical or dental implants. Regardless of any such product designation, any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products.
Copyright © 2026 Celanese or its affiliates. All rights reserved.
Celanese®, registered C-ball design and all other trademarks identified herein with ®, TM, SM, unless otherwise noted, are trademarks of Celanese or its affiliates.