ISSUED: 16/08/2017   ISO 9001 CERTIFIED

Promyde B300 P2 GFC15 is a high flow Polyamide 6 injection moulding grade with 15% glass fibre, heat stabilized and Food Contact approved.

PROPERTIES	CONDITIONS	TEST METHOD	UNITS	VALUES
PHYSICAL PROPERTIES				
Density	23 ºC	ISO 1183	g/cm^3	1,22
Viscosity Number	25 ºC	ISO 307	cm^3/ g	100
Moisture absorption	23 ºC / 50% r.h.	ISO 62	%	2,6
Water absorption	23 ºC / saturation in water	ISO 62	%	8
Flammability	1,5 mm	UL-94		HB
PROCESSING CONDITIONS				
Melt Volume rate	275ºC/5 kg	ISO 1133	cm^3/10 min	135
Melt temperature, injection moulding			ºC	230-260
Mould temperature			ºC	40-80
Moulding Shrinkage	longitudinal transversal		%	0,4-0,7 0,6-0,9
MECHANICAL PROPERTIES				(dry/cond.)*
Tensile modulus	23 ºC, 1 mm/min	ISO 527-1-2	MPa	6.000 / 3.400
Tensile strength	23 ºC, 50 mm/min	ISO 527-1-2	MPa	150 / 80
Elongation at yield	23 ºC, 50 mm/min	ISO 527-1-2	%	- / -
Elongation at break	23 ºC, 50 mm/min	ISO 527-1-2	%	3,0 / 7
Flexural modulus	23 ºC, 2 mm/min	ISO 178	MPa	5.700 / 2.800
Flexural strength	23 ºC, 2 mm/min	ISO 178	MPa	180 / 90
Charpy unnotched impact strength	23ºC -30ºC	ISO 179/1eU	kJ/m^2	50 / 90 43
Charpy notched impact strength	23ºC -30ºC	ISO 179/1eA	kJ/m^2	6,5 / 12 5
THERMAL PROPERTIES				
Melting temperature (DSC)	10ºC/min	ISO 3146	ºC	222
Heat Deflection Temperature (HDT)	1,8 MPa 0,45 MPa	ISO 75-1-2	ºC	190 215
Thermal coefficient of linear expansion	23-80ºC long. 23-80ºC transv.	ISO 11359-1/-2	10^{-4}/K	0,3 0,7
ELECTRICAL PROPERTIES				(dry/cond.)*
Dielectric constant	1MHz	IEC 60250		3,6 / 6,9
Dissipation factor	1 MHz	IEC 60250		250 / 2.200
Volume resistivity		IEC 60093	Ω.m	10^{13} / 10^{10}
Surface resistivity		IEC 60093	Ω	10^{13} / 10^{10}
Comparative tracking index		IEC 60112		500

* dry = dry as moulded / cond.= conditioned according to ISO 1110

NUREL ENGINEERING POLYMERS

PROMYDE ® is trademark of NUREL, S.A.

Nurel S.A.
Ctra. Barcelona km 329
50016 Zaragoza. Spain
T +34 976 465 579
F +34 976 574 108
www.promyde.com

CHARACTERISTICS

The outstanding flow properties of Promyde B300 P2 GFC15 allow a reduction in molding temperature. This has two advantages: the cycle time is shorter and less energy is needed in injection molding. Because Promyde B300 P2 GFC15 has better flow, lower injection pressure is needed which reduces the clamping force, longer flow paths are possible and the mold is easier to design.

APPLICATIONS

The flow properties of Promyde B300 P2 GFC15 combined with its excellent mechanical and thermal properties make it suitable for a **wide range of industrial, automotive and electrical applications, especially in long flow path and thin wall parts.**

Glass-fibre reinforced grades are suitable for housings, supports, industrial articles and electrical insulating parts.

FORMAT AND STORAGE

Promyde B300 P2 GFC15 is supplied in moisture-proof packaging. Typical formats are Big Bag, octabin, and 25kg bags.
All containers are perfectly sealed. The product should be stored in a dry place and opened just before processing.

PROCESSING GUIDELINES

Drying

Material is supplied ready to process with a low moisture content. When moisture absorption is prevented drying is not required. When drying is necessary, conditions are:

Drying temperature $\leq$ 80 ºC   Dying time: 4-6 hours

Injection moulding

The recommended processing parameters for injection moulding are:

Melt temperature: 230-260ºC   Mould temperature: 40-80 ºC
Injection speed: medium to high   Back pressure: moderate

Shrinkage

The shrinkage of a moulded part is influenced by wall thickness, mould gating, and moulding conditions.

Moisture

A particular characteristic of reinforced polyamide 6 is its combination of moderate tensile and flexural strength with rigidity, good impact strength, and friction resistance. However, when a moulded part absorbs moisture, tensile and flexural strength decrease and toughness increases.

NOTE

All recommendations are based on knowledge and experience; The values have been established on standardized tests. The figures should be regarded as guide values and not as binding minimum values. As many factors may affect processing or applications, we recommend that customers make their own tests to determine the suitability of a product for its particular use.