Promyde®
PROGRESSING POLYAMIDE

TECHNICAL DATA SHEET

B300 P2 G20 U0

ISSUED: 07/02/2023 **ISO 9001 CERTIFIED**

Promyde B300 P2 G20 U0 is a high flow Polyamide 6 with 20% glass fibre, and flame retardant using a **halogen and red phosphorous free** flame retardant system.

PROPERTIES	CONDITIONS	TEST METHOD	UNITS	VALUES
PHYSICAL PROPERTIES				
Density	23 ºC	ISO 1183	g/cm^3	1,34
Moisture absorption	23 ºC	ISO 62	%	2,3
Water absorption	23 ºC	ISO 62	%	6,9
Flammability	1,5 mm	UL-94		V-0
Glow wire flammability index	1,5 mm	IEC 60695-2-12,13	ºC	960
Glow wire ignitability temperature	1,5 mm	IEC 60695-2-12,13	ºC	775
PROCESSING CONDITIONS				
Melt temperature, injection moulding			ºC	250-270
Mould temperature			ºC	40-80
Moulding Shrinkage	longitudinal transversal		%	0,2-0,5 0,7-0,9
MECHANICAL PROPERTIES				(dry /cond.)*
Tensile modulus	23 ºC, 1 mm/min	ISO 527-1/-2	MPa	9.000 / 6.000
Tensile strength	23 ºC, 50 mm/min	ISO 527-1/-2	MPa	125 / 70
Elongation at break	23 ºC, 50 mm/min	ISO 527-1/-2	%	3 / 7
Flexural modulus	23ºC, 2 mm/min	ISO 178	MPa	8.000 / 5.000
Flexural strength	23ºC, 2 mm/min	ISO 178	MPa	190 / 100
Charpy unnotched impact strength	23ºC	ISO 179/1eU	kJ/m^2	65 / 90
Charpy notched impact strength	23ºC	ISO 179/1eA	kJ/m^2	8,5 / 25
THERMAL PROPERTIES				
Melting temperature (DSC)	10ºC/min	ISO 3146	ºC	222
Heat Deflection Temperature (HDT)	1,8 MPa	ISO 75-1/-2	ºC	190
Thermal coefficient of linear expansion	23-80ºC long. 23-80ºC transv.	ISO 11359-1/-2	10^{-4}/K	0,2 0,6
ELECTRICAL PROPERTIES				(dry/cond.)*
Dielectric constant	1MHz	IEC 60250	-	3,7 / 6,8
Dissipation factor	1 MHz	IEC 60250	10^{-4}	230 / 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		600

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

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CHARACTERISTICS

Promyde B300 P2 G20 U0 is a polyamide 6 with 20% glass fibre with high flow, mechanical strength, heat stabilized and lubricated for injection moulding**. Its halogen free flame retardant system** enhances its flame behavior to V0- UL rated category.

APPLICATIONS

Promyde B300 P2 G20 U0 allows a fast and **efficient mould filling**, **and an easy mould release,** that combined with its **excellent mechanical properties**, and its flame retardant properties make it suitable for components specially used in electrical and electronics industries.

FORMAT AND STORAGE

Promyde B300 P2 G20 U0 is supplied in moisture-proof packaging. Typical formats are Big Bag, octavin, 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 ≤ 80 ºC

Dying time: 4-6 hours

Injection moulding

The recommended processing parameters for injection moulding are:

Melt temperature: 250-270ºC

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 unreinforced 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.

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