

ISSUED: 25/11/2020

ISO 9001 CERTIFIED

Promyde B30 P2 G30 S1 U2 is an injection moulding polyamide 6 reinforced with 30% 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 °C	ISO 1183	g/cm ³	1,40
Moisture absorption	23 °C	ISO 62	%	1,5
Water absorption	23 °C	ISO 62	%	5,5
FLAMMABILITY				
Flammability	0,8 mm	UL-94	Class	V-2
	1,5 mm			V-2
	3 mm			V-2
Glow wire flammability index	1,5 mm	IEC 60695-2-12,13	°C	960
Glow wire ignitability temperature	1,5 mm	IEC 60695-2-12,13	°C	725
PROCESSING CONDITIONS				
Melt temperature, injection moulding			°C	250-290
Mould temperature			°C	60-100
Moulding Shrinkage	longitudinal		%	0,5-0,6
	transversal		%	0,7-0,9
MECHANICAL PROPERTIES				(DAM)*
Tensile modulus	23 °C, 1 mm/min	ISO 527-1/-2	MPa	7.900
Tensile strength	23 °C, 50 mm/min	ISO 527-1/-2	MPa	85
Elongation at break	23 °C, 50 mm/min	ISO 527-1/-2	%	2,1
Flexural modulus	23°C, 2 mm/min	ISO 178	MPa	7.000
Flexural strength	23°C, 2 mm/min	ISO 178	MPa	90
Charpy unnotched impact strength	23°C	ISO 179/1eU	kJ/m ²	30
Charpy notched impact strength	23°C	ISO 179/1eA	kJ/m ²	4,0
THERMAL PROPERTIES				
Melting temperature (DSC)	10°C/min	ISO 3146	°C	220
Heat Deflection Temperature (HDT)	1,8 MPa	ISO 75-2	°C	160
ELECTRICAL PROPERTIES				(DAM)*
Volume resistivity		IEC 60093	Ω.m	10 ¹³
Surface resistivity		IEC 60093	Ω	10 ¹⁴
Comparative tracking index		IEC 60112		525

* DAM = dry as moulded

CHARACTERISTICS

Promyde B30 P2 G30 S1 U2 is a polyamide 6 with 30% glass fibre with high mechanical strength, heat stabilized and lubricated for injection moulding. Its halogens and red-phosphorous free flame retardant system enhances its flame behavior to V2- UL rated category and GWFI up to 960°C.

APPLICATIONS

Promyde B30 P2 G30 S1 U2 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 electronic industries.

FORMAT AND STORAGE

Promyde B30 P2 G30 S1 U2 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 low moisture content. When moisture absorption is prevented, drying is not required. When drying is necessary, conditions are:

Drying temperature ≤ 80 °C

Drying time: 4-6 hours

Injection moulding

The recommended processing parameters for injection moulding are:

Melt temperature: 250-290°C

Mould temperature: 60-100 °C

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.