

ISSUED: 04/06/2021

ISO 9001 CERTIFIED

Promyde BF730 is a copolyamide with improved transparency.

PROPERTIES	CONDITIONS	TEST METHOD	UNITS	VALUES
<b>PHYSICAL PROPERTIES</b>				
Density	23 °C	ISO 1183	g/cm <sup>3</sup>	1,15
Haze	Mold T <sup>a</sup> =30°C; Thickness 1,5mm	ASTM D1003	%	3
Moisture absorption	23 °C / 50% r.h.	ISO 62	%	3
Water absorption	23 °C / saturation in water	ISO 62	%	9,5
Flammability	1,5 mm	UL-94		V-2
Glow wire flammability index	1,5 mm	IEC 60695-2-12,13	°C	800
Glow wire ignitability temperature	1,5 mm	IEC 60695-2-12,13	°C	825
<b>PROCESSING CONDITIONS</b>				
Melt Volume Rate	275°C/5 kg	ISO 1133	cm <sup>3</sup> /10 min	180
Melt temperature, injection moulding			°C	210-290
Mould temperature			°C	0-80
Moulding Shrinkage	longitudinal transversal		%	0,16-0,24 0,0-0,08
<b>MECHANICAL PROPERTIES</b>				
<b>(dry/cond.)*</b>				
Tensile modulus	23 °C, 1 mm/min	ISO 527-1/-2	MPa	2.900/ 1.500
Tensile strength	23 °C, 50 mm/min	ISO 527-1/-2	MPa	50 / 30
Elongation at yield	23 °C, 50 mm/min	ISO 527-1/-2	%	- / -
Elongation at break	23 °C, 50 mm/min	ISO 527-1/-2	%	1,9/ > 20
Flexural modulus	23 °C, 2 mm/min	ISO 178	MPa	2.800 / 1.300
Flexural strength	23 °C, 2 mm/min	ISO 178	MPa	112 / 60
Charpy unnotched impact strength <sup>1)</sup>	23°C -30°C	ISO 179/1eU	kJ/m <sup>2</sup>	139 / NB - / -
Charpy notched impact strength	23°C -30°C	ISO 179/1eA	kJ/m <sup>2</sup>	6,8 / 40 - / -
<b>THERMAL PROPERTIES</b>				
Melting temperature (DSC)	10°C/min	ISO 3146	°C	185
Heat Deflection Temperature (HDT)	1,8 MPa 0,45 MPa	ISO 75-1/-2	°C	60 60
Thermal coefficient of linear expansion	23-80°C long. 23-80°C transv.	ISO 11359-1/-2	10 <sup>-4</sup> /K	0,7 1

1) NB: No break.

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

### CHARACTERISTICS

Promyde BF730 is a copolyamide with improved transparency at high thickness, for technical injection moulding.

Its main characteristics are **transparency, easy flowing and easy mould filling** whilst maintaining excellent polyamide chemical and mechanical properties.

### APPLICATIONS

Promyde BF730 is appropriate for the injection moulding of unfilled polyamide 6 applications where improved transparency is desired in applications under 80°C

### FORMAT AND STORAGE

Promyde BF730 is supplied in moisture-proof packaging. Typical formats are Big Bags, Octabins, 25kg bags, and bulk silo trucks. 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  $\leq 80$  °C

Drying time: 4-6 hours

#### Injection moulding

The recommended processing parameters for injection moulding are:

Melt temperature: 210-280°C

Mould temperature: 0-80 °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 polyamides 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.