

Promyde® B20 P

Polyamide 6

NUREL, S.A.

Message:

Promyde® B20 P is a Polyamide 6 heat stabilised, nucleated and lubricated.

CHARACTERISTICS

Promyde B20 P is a polyamide 6 heat stabilized, lubricated and nucleated for fast cycle and technical injection moulding. Its main characteristics are easy flowing, easy mould filling and very fast cooling time whilst maintaining excellent polyamide 6 mechanical properties.

APPLICATIONS

Due to its easy flow characteristics and very fast cooling time; Promyde B20 P provides significant productivity improvement. Promyde B20 P mould filling is 35 % faster than standard viscosity polyamide 6; that combined with its excellent mechanical and thermal properties make it suitable for high speed multi cavity injection moulding for parts such as components used in automotive, electrical, electronics, curtain systems, and also for large technical parts produced in single cavity moulds.

General Information				
UL YellowCard		E341743-100985640		
Additive		Nucleating agent		
		heat stabilizer		
		Lubricant		
Features		Nucleated		
		Fast molding cycle		
		Good formability		
		Good liquidity		
		Thermal Stability		
		Lubrication		
Uses		Good demoulding performance		
		Electrical/Electronic Applications		
		Electrical components		
		Engineering accessories		
Processing Method		Application in Automobile Field		
		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.13	--	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (275°C/5.0 kg)	226	--	cm ³ /10min	ISO 1133
Molding Shrinkage				ISO 294-4
Vertical flow direction	0.80 - 1.1	--	%	ISO 294-4
Flow direction	0.90 - 1.1	--	%	ISO 294-4
Water Absorption				ISO 62
Saturated, 23°C	9.5	--	%	ISO 62

Equilibrium, 23°C, 50% RH	3.0	--	%	ISO 62
Viscosity Number	125	--	cm ³ /g	ISO 307
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	3300	1100	MPa	ISO 527-2/1
Tensile Stress (Yield, 23°C)	85.0	40.0	MPa	ISO 527-2/50
Tensile Strain (Yield, 23°C)	3.5	25	%	ISO 527-2/50
Nominal Tensile Strain at Break (23°C)	18	> 50	%	ISO 527-2/50
Flexural Modulus ¹ (23°C)	2800	1000	MPa	ISO 178
Flexural Stress ² (23°C)	110	30.0	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	4.5	--	kJ/m ²	ISO 179/1eA
23°C	5.0	30	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	320	--	kJ/m ²	ISO 179/1eU
23°C	No Break	No Break		ISO 179/1eU
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	187	--	°C	ISO 75-2/B
1.8 MPa, not annealed	65.0	--	°C	ISO 75-2/A
Melting Temperature (DSC) ³	222	--	°C	ISO 3146
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 80°C	7.0E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 80°C	1.0E-4	--	cm/cm/°C	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+13	1.0E+10	ohms	IEC 60093
Volume Resistivity	1.0E+15	1.0E+12	ohms·cm	IEC 60093
Dielectric Constant (1 MHz)	3.50	7.00		IEC 60250
Dissipation Factor (1 MHz)	0.030	0.30		IEC 60250
Comparative Tracking Index	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (1.50 mm)	V-2	--		UL 94
Glow Wire Flammability Index (1.50 mm)	850	--	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (1.60 mm)	700	--	°C	IEC 60695-2-13
Injection	Dry	Unit		

Drying Temperature	< 80.0	°C
Drying Time	4.0 - 6.0	hr
Processing (Melt) Temp	250 - 270	°C
Mold Temperature	40.0 - 80.0	°C
Injection Rate	Moderate-Fast	

Injection instructions

Back Pressure: moderate

NOTE

1. 2.0 mm/min
2. 2.0 mm/min
3. 10°C/min

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