

Promyde® B30 P2 G40

Polyamide 6

NUREL, S.A.

Message:

PROMYDE® B30 P3 G40 is a Polyamide 6 injection moulding grade with 40% glass fibre and heat stabilized.

CHARACTERISTICS

Promyde B30 P2 G40 is distinguished by high mechanical strength, hardness, rigidity, thermo stability (melting point 220°C), and resistance to hot lubricants and water. Parts made from Promyde B30 P2 G40 have particularly high dimensional stability and creep strength.

APPLICATIONS

Promyde B30 P2 G40 is used in a wide range of applications where a combination of mechanical properties and thermal resistance is needed.

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

General Information				
Filler / Reinforcement		Glass fiber reinforced material, 40% filler by weight		
Additive		heat stabilizer		
Features		Good dimensional stability		
		Rigidity, high		
		High strength		
		Good creep resistance		
		Thermal Stability		
		Thermal stability, good		
Uses		High hardness		
		Electrical/Electronic Applications		
		Electrical components		
		Industrial application		
		Insulating material		
Processing Method		Shell		
		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.46	--	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (275°C/5.0 kg)	26.0	--	cm ³ /10min	ISO 1133
Molding Shrinkage				
Vertical flow direction	0.40 - 0.45	--	%	
Flow direction	0.30 - 0.35	--	%	
Water Absorption				ISO 62
Saturated, 23°C	6.0	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.8	--	%	ISO 62
Viscosity Number ¹ (H ₂ SO ₄ (Sulphuric Acid))	145	--	cm ³ /g	ISO 960

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	13000	8500	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	205	138	MPa	ISO 527-2/50
Tensile Strain (Break, 23°C)	3.0	3.5	%	ISO 527-2/50
Flexural Modulus ² (23°C)	10600	6500	MPa	ISO 178
Flexural Stress ³ (23°C)	285	180	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	16	22	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	95	100	kJ/m ²	ISO 179/1eU
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	215	--	°C	ISO 75-2/B
1.8 MPa, not annealed	213	--	°C	ISO 75-2/A
Melting Temperature (DSC) 4	222	--	°C	ISO 3146
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 80°C	1.6E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 80°C	6.0E-5	--	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)	3.90	6.50		IEC 60250
Dissipation Factor (1 MHz)	0.019	0.18		IEC 60250
Comparative Tracking Index	500	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (1.50 mm)	HB	--		UL 94
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.	0,005 g/ml H2SO4			
2.	2.0 mm/min			
3.	2.0 mm/min			
4.	10°C/min			

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