

Promyde® B30 P2 G50

Polyamide 6

NUREL, S.A.

Message:

Promyde® B30 P2 G50 is a Polyamide 6 injection moulding grade with 50% Glass fibre and heat stabilised.

CHARACTERISTICS

Promyde B30 P2 G50 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 G50 have particularly high dimensional stability and creep strength.

APPLICATIONS

Promyde B30 P2 G50 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, 50% filler by weight		
Additive		heat stabilizer		
Features		Good dimensional stability		
		Rigidity, high		
		High strength		
		Good creep resistance		
		Thermal stability, good		
		High hardness		
Uses		Electrical/Electronic Applications		
		Electrical components		
		Electronic insulation		
		Shell		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.56	--	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (275°C/5.0 kg)	25.0	--	cm ³ /10min	ISO 1133
Molding Shrinkage				ISO 294-4
Vertical flow direction	0.40 - 0.45	--	%	ISO 294-4
Flow direction	0.30 - 0.35	--	%	ISO 294-4
Water Absorption				ISO 62
Saturated, 23°C	4.5	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.5	--	%	ISO 62
Viscosity Number	145	--	cm ³ /g	ISO 307
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	15600	10000	MPa	ISO 527-2/1
Tensile Stress (Yield, 23°C)	215	150	MPa	ISO 527-2/50

Tensile Strain (Break, 23°C)	3.0	3.5	%	ISO 527-2/50
Flexural Modulus ¹ (23°C)	14000	8000	MPa	ISO 178
Flexural Stress ² (23°C)	340	--	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	19	27	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	95	110	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	215	--	°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	1.3E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 80°C	5.0E-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)	4.20	6.30		IEC 60250
Dissipation Factor (1 MHz)	0.014	0.14		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.	2.0 mm/min			
2.	2.0 mm/min			
3.	10°C/min			

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