

Promyde® B30 P2 G45 MI

Polyamide 6

NUREL, S.A.

Message:

Promyde B30 P2 G45 MI is a Polyamide 6 injection moulding grade with 45% glass fibre, impact modified and heat stabilized.

CHARACTERISTICS

This material is distinguished by high mechanical strength and impact resistance. Parts made from Promyde B30 P2 G45 MI have particularly high dimensional stability and creep strength.

APPLICATIONS

Promyde B30 P2 G45 MI is used in a wide range of applications where a combination of mechanical properties, thermal resistance and resistance to breakage by impact is needed.

General Information				
Filler / Reinforcement		Glass fiber reinforced material, 45% filler by weight		
Additive		Impact modifier heat stabilizer		
Features		Good dimensional stability Impact modification High strength Good creep resistance Thermal Stability Thermal stability, good		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.50	--	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (275°C/5.0 kg)	20.0	--	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	5.0	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.6	--	%	ISO 62
Viscosity Number	145	--	cm ³ /g	ISO 307
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	14300	9300	MPa	ISO 527-2/1
Tensile Stress (23°C)	210	130	MPa	ISO 527-2/50
Tensile Strain (Break, 23°C)	2.5	8.0	%	ISO 527-2/50
Flexural Modulus ¹ (23°C)	11900	7000	MPa	ISO 178
Flexural Stress ² (23°C)	250	150	MPa	ISO 178

Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	13	--	kJ/m ²	ISO 179/1eA
23°C	17	40	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	90	--	kJ/m ²	ISO 179/1eU
23°C	95	120	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	210	--	°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	1.0E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 80°C	4.5E-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)	4.00	5.00		IEC 60250
Dissipation Factor (1 MHz)	0.020	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.	2.0 mm/min			
2.	2.0 mm/min			
3.	10°C/min			

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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