

Promyde® B30 P2 GFC15

Polyamide 6

NUREL, S.A.

Message:

Promyde B30 P2 GFC15 is a Polyamide 6 injection moulding grade with 15% glass fibre and heat stabilized.

CHARACTERISTICS

Promyde B30 P2 GFC15 is distinguished by high mechanical strength, hardness, rigidity, thermo stability (melting point 222°C), and resistance to hot lubricants and water. Parts made from Promyde B30 P2 GFC15 have particularly high dimensional stability and creep strength. This material is suitable for Food Contact applications.

APPLICATIONS

Promyde B30 P2 GFC15 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, 15% filler by weight		
Additive		heat stabilizer		
Features		Good dimensional stability		
		Rigidity, high		
		High strength		
		Insulation		
		Good creep resistance		
		Thermal Stability		
		Thermal stability, good		
		Compliance of Food Exposure		
		High hardness		
Uses		Electrical components		
		Electronic insulation		
		Industrial application		
		Shell		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.22	--	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (275°C/5.0 kg)	60.0	--	cm³/10min	ISO 1133
Molding Shrinkage				
Vertical flow direction	0.60 - 0.90	--	%	
Flow direction	0.40 - 0.70	--	%	
Water Absorption				ISO 62
Saturated, 23°C	8.0	--	%	ISO 62
Equilibrium, 23°C, 50% RH	2.6	--	%	ISO 62

Viscosity Number	145	--	cm ³ /g	ISO 307
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	6000	3400	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	150	78.0	MPa	ISO 527-2/50
Tensile Strain (Yield, 23°C)	3.5	7.0	%	ISO 527-2/50
Flexural Modulus ¹ (23°C)	5000	2400	MPa	ISO 178
Flexural Stress ² (23°C)	180	90.0	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	5.0	--	kJ/m ²	ISO 179/1eA
23°C	5.5	12	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	43	--	kJ/m ²	ISO 179/1eU
23°C	50	90	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	200	--	°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	3.0E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 80°C	7.0E-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)	3.60	6.90		IEC 60250
Dissipation Factor (1 MHz)	0.025	0.22		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

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

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