

Promyde® B30 NC100

Polyamide 6

NUREL, S.A.

Message:

Promyde B30 NC100 is a polyamide 6 fortified with nano clay technology. It is heat stabilized, lubricated and ready for injection molding.

CHARACTERISTICS

Promyde B30 NC100 is a polyamide 6 heat stabilized, lubricated and nucleated for fast cycle injection moulding. The incorporation of nano clay particles gives a product 20% stronger than conventional unfilled PA6, or PA66.

APPLICATIONS

Promyde B30 NC100 provides significant weight reduction advantages over glass filled, glass bead filled, and mineral filled PA6, and PA66. Promyde B30 NC100 processes similarly to standard unfilled PA6 and can be used in PA66 moulds. Promyde B30 NC100 is suitable for PA66 applications where temperature is not critical, as a lighter alternative to mineral filled and glass bead filled polyamides, and parts where dimensional stability is vital.

General Information				
Filler / Reinforcement		Clay nanofiller		
Additive		Nucleating agent		
		heat stabilizer		
		Lubricant		
Features		Nucleated		
		Good dimensional stability		
		Fast molding cycle		
		Thermal Stability		
		Lubrication		
		Fill		
		Good demoulding performance		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.14	--	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (275°C/5.0 kg)	145	--	cm ³ /10min	ISO 1133
Molding Shrinkage				
Vertical flow direction	0.80 - 0.90	--	%	
Flow direction	0.70 - 0.85	--	%	
Water Absorption				ISO 62
Saturated, 23°C	7.0	--	%	ISO 62
Equilibrium, 23°C, 50% RH	2.3	--	%	ISO 62
Viscosity Number ¹ (H2SO4 (Sulphuric Acid))	132	--	cm ³ /g	ISO 960
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	4000	2000	MPa	ISO 527-2/1

Tensile Stress (23°C)	100	52.0	MPa	ISO 527-2/50
Tensile Strain				ISO 527-2/50
Yield, 23°C	3.5	25	%	ISO 527-2/50
Fracture, 23°C	4.0	> 25	%	ISO 527-2/50
Flexural Modulus ² (23°C)	3500	1400	MPa	ISO 178
Flexural Stress ³ (23°C)	130	70.0	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	4.3	10	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	No Break	No Break		ISO 179/1eU
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	100	--	°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	3.0E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 80°C	8.0E-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	6.50		IEC 60250
Dissipation Factor (1 MHz)	0.025	0.25		IEC 60250
Comparative Tracking Index	500	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (1.50 mm)	V-2	--		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	20.0 - 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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