Promyde® B15 U

Polyamide 6

NUREL, S.A.

Message:

Promyde B15 U is a Polyamide 6 flame retardant, heat stabilised, nucleated and lubricated.
CHARACTERISTICS
Promyde ® B15 U is an improved flame retardant polyamide 6 heat stabilized, lubricated and nucleated for fast cycle injection moulding. Its main characteristics are easy flowing, easy mould filling and very fast cooling time whilst maintaining excellent polyamide 6 mechanical properties.
APPLICATIONS
Due to its improved Glow Wire Flammanbility Index of 960°C, easy flow characteristics and very fast cooling time; Promyde B15 U provides significant productivity improvement. Promyde B15 U mould filling is 35 % faster than standard viscosity polyamide 6; that combined with its excellent mechanical and thermal properties make it suitable for high speed multi cavity injection moulding of small flame resistant parts such as components used in automotive, electrical, electronics, or technical parts.

General Information	
Additive	Nucleating agent
	heat stabilizer
	Lubricant
	Flame retardancy
Features	Nucleated
	Fast molding cycle
	Good formability
	Good liquidity
	Thermal Stability
	Lubrication
	Good demoulding performance
	Flame retardancy
Uses	Electrical/Electronic Applications
	Electrical components
	Engineering accessories
	Application in Automobile Field
Processing Method	Injection molding

Physical	Dry	Conditioned	Unit	Test Method
Density	1.13	--	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (275°C/5.0 kg)	260	--	cm³/10min	ISO 1133
Molding Shrinkage				ISO 294-4
Vertical flow direction	0.80 - 1.1	--	%	ISO 294-4
Flow direction	0.90 - 1.1	--	%	ISO 294-4
Water Absorption				ISO 62

Saturated, 23°C	9.5	--	%	ISO 62
Equilibrium, 23°C, 50% RH	3.0	--	%	ISO 62
Viscosity Number	120	--	cm^3/g	ISO 307
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus (23°C)	3300	1100	MPa	ISO 527-2/1
Tensile Stress (Yield, 23°C)	85.0	40.0	MPa	ISO 527-2/50
Tensile Strain				ISO 527-2/50
Yield, 23°C	3.5	25	%	ISO 527-2/50
Fracture, 23°C	18	> 50	%	ISO 527-2/50
Flexural Modulus [1] (23°C)	2800	1000	MPa	ISO 178
Flexural Stress [2] (23°C)	110	30.0	MPa	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	4.5	--	kJ/m^2	ISO 179/1eA
23°C	5.0	30	kJ/m^2	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	320	--	kJ/m^2	ISO 179/1eU
23°C	No Break	No Break		ISO 179/1eU
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Heat Deflection Temperature				
0.45 MPa, not annealed	187	--	°C	ISO 75-2/B
1.8 MPa, not annealed	65.0	--	°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	7.0E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 80°C	1.0E-4	--	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)	3.50	7.00		IEC 60250
Dissipation Factor (1 MHz)	0.030	0.30		IEC 60250
Comparative Tracking Index	600	--	V	IEC 60112
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Flame Rating (1.50 mm)	V-2	--		UL 94
Glow Wire Flammability Index (1.50 mm)	960	--	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (1.50 mm)	750	--	°C	IEC 60695-2-13

Injection	Dry	Unit	
Drying Temperature	< 50.0		°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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