Technical Data Sheet

Matrixx P65E0NA

Polyamide 6
LyondellBasell Industries
Engineering Plastics

Product Description
High Impact Nylon 6

General			
Features	• Heat Aging Resistant	• Impact Modified	• Oil Resistant
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical	Dry	Conditioned	Unit	Test Method
Density	1.08	--	g/cm³	ISO 1183/A
Water Absorption (24 Hr)	1.3	--	%	ASTM D570
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus				
--	281000 (1940)	76400 (527)	psi (MPa)	ASTM D638
--	282000 (1940)	81700 (564)	psi (MPa)	ISO 527-1
Tensile Strength				
Yield	7200 (49.7)	3770 (26.0)	psi (MPa)	ASTM D638
Yield	7450 (51.4)	3950 (27.3)	psi (MPa)	ISO 527-2
Flexural Modulus - Chord				
--	260000 (1790)	69300 (478)	psi (MPa)	ASTM D790
--	284000 (1960)	76400 (527)	psi (MPa)	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179
-22°f (-30°c)	5.0 (11)	--	ft·lb/in² (kJ/m²)	
73°f (23°c)	16 (34)	33 (68)	ft·lb/in² (kJ/m²)	
Notched Izod Impact				ASTM D256
-22°f (-30°c)	7.0 (370)	--	ft·lb/in (J/m)	
73°f (23°c)	15 ft·lb/in (800 J/m)	No Break	(J/m)	
Instrumented Dart Impact				ASTM D3763
-22°f (-30°c), Total Energy, Ductile Failure	643 (72.6)	--	in·lb (J)	
73°f (23°c), Total Energy, Ductile Failure	546 (61.7)	588 (66.4)	in·lb (J)	

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Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
66 Psi (0.45 Mpa), Unannealed	257 (125)	--	°F (°C)	ASTM D648
66 Psi (0.45 Mpa), Unannealed	266 (130)	--	°F (°C)	ISO 75-2/Bf
264 Psi (1.8 Mpa), Unannealed	123 (50.4)	--	°F (°C)	ASTM D648
264 Psi (1.8 Mpa), Unannealed	124 (50.9)	--	°F (°C)	ISO 75-2/Af
CLTE				ASTM E831
Flow : 140°f (60°c)	5.4E-5 (9.7E-5)	--	in/in/°F (cm/cm/°C)	
Transverse : 140°f (60°c)	6.2E-5 (1.1E-4)	--	in/in/°F (cm/cm/°C)	

Additional Information

Conditioned: 7 DAYS AT 70°C/62% HUMIDITY

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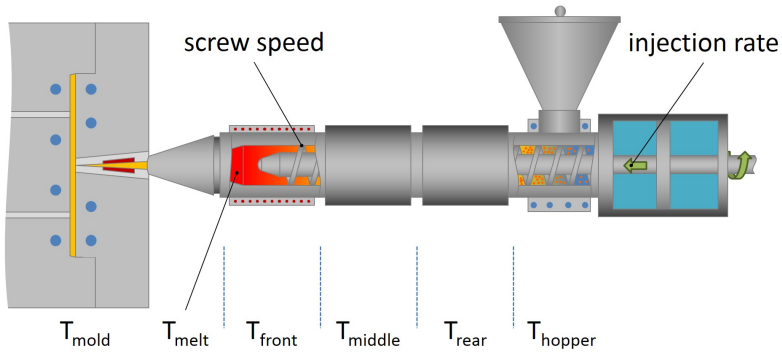

Injection	Dry (English)	Dry (SI)
Drying Temperature - Desiccant Dryer	180 °F	82 °C
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr
Suggested Max Moisture	0.04 to 0.10 %	0.04 to 0.10 %
Rear Temperature	469 to 540 °F	243 to 282 °C
Middle Temperature	469 to 540 °F	243 to 282 °C
Front Temperature	469 to 540 °F	243 to 282 °C
Nozzle Temperature	480 to 560 °F	249 to 293 °C
Processing (Melt) Temp	460 to 520 °F	238 to 271 °C
Mold Temperature	140 to 180 °F	60 to 82 °C
Injection Rate	Moderate	Moderate
Back Pressure	< 50.0 psi	< 0.345 MPa
Cushion	0.125 to 0.250 in	3.18 to 6.35 mm

Notes

These are typical property values not to be construed as specification limits.