

Technical Data Sheet



Matrixx P65E0NA

Polyamide 6
LyondellBasell Industries
Engineering Plastics

Product Description

High Impact Nylon 6

General

Material Status	• Commercial: Active		
Availability	• North America		
Features	• Heat Aging Resistant	• Impact Modified	• Oil Resistant
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical	Dry	Conditioned	Unit	Test Method
Density	1.08	--	g/cm ³	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/in ² (kJ/m ²)	ASTM D256
73°F (23°C)	16 (34)	33 (68)	ft·lb/in ² (kJ/m ²)	
Notched Izod Impact				
-22°F (-30°C)	7.0 (370)	--	ft·lb/in (J/m)	ASTM D3763
73°F (23°C)	15 ft·lb/in (800 J/m)	No Break	(J/m)	
Instrumented Dart Impact				
-22°F (-30°C), Total Energy, Ductile Failure	643 (72.6)	--	in·lb (J)	ASTM D3763
73°F (23°C), Total Energy, Ductile Failure	546 (61.7)	588 (66.4)	in·lb (J)	

Technical Data Sheet

**Matrixx P65E0NA**

Polyamide 6
LyondellBasell Industries
Engineering Plastics

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				

Technical Data Sheet



Matrixx P65E0NA

Polyamide 6
LyondellBasell Industries
Engineering Plastics



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.

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Product Storage and Handling

- Product should be stored in dry conditions at temperatures below 50°C and protected from UV-light
- Improper storage may bring damage to the packaging and can negatively affects on the quality of this product
- Keep material completely dry for good processing

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

© LyondellBasell Industries Holdings, B.V. 2024

Disclaimer

Information in this document is accurate to the best of our knowledge at the date of publication. The document is designed to provide users general information for safe handling, use, processing, storage, transportation, disposal and release and does not constitute any warranty or quality specification, either express or implied, including any warranty of merchantability or fitness for any particular purpose. Users shall determine whether the product is suitable for their use and can be used safely and legally.

In addition to any prohibitions of use specifically noted in this document, LyondellBasell may further prohibit or restrict the sale of its products into certain applications. For further information, please contact a LyondellBasell representative.

Trademarks

The Trademark referenced within the product name is owned or used by the LyondellBasell family of companies.