

Technical Data Sheet



Diamaloy Engineered Alloys ABS NYLON 4010A

Acrylonitrile Butadiene Styrene + PA

LyondellBasell Industries

Engineering Plastics

General			
Material Status	• Commercial: Active		
Availability	• North America		
Features	• Good Weather Resistance		
Forms	• Pellets		
Processing Method	• Injection Molding		
Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity	1.09	1.09 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) ¹ (265°C/5.0 kg)	37 g/10 min	37 g/10 min	ASTM D1238
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			ASTM D638
Yield, 73°F (23°C), 0.125 in (3.18 mm), Injection Molded ^{2, 3}	6320 psi	43.6 MPa	
Yield, 73°F (23°C), 0.125 in (3.18 mm), Injection Molded ^{2, 4}	6120 psi	42.2 MPa	
Break, 73°F (23°C), 0.125 in (3.18 mm), Injection Molded ^{5, 6}	5720 psi	39.4 MPa	
Break, 73°F (23°C), 0.125 in (3.18 mm), Injection Molded ^{5, 7}	5200 psi	35.9 MPa	
Tensile Elongation ⁵			ASTM D638
Yield, 73°F (23°C), 0.125 in (3.18 mm), Injection Molded ⁶	3.6 %	3.6 %	
Yield, 73°F (23°C), 0.125 in (3.18 mm), Injection Molded ⁷	3.7 %	3.7 %	
Break, 73°F (23°C), 0.125 in (3.18 mm), Injection Molded ⁶	200 %	200 %	
Break, 73°F (23°C), 0.125 in (3.18 mm), Injection Molded ⁷	15 %	15 %	
Flexural Modulus - Tangent ⁸			ASTM D790B
73°F (23°C), 0.125 in (3.18 mm), Injection Molded, 2.00 in (50.8 mm) Span	214000 psi	1480 MPa	
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			ASTM D256A
73°F (23°C), 0.125 in (3.18 mm), Injection Molded	No Break	No Break	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Unannealed, 0.125 in (3.18 mm), Injection Molded	127 °F	52.8 °C	
Vicat Softening Temperature	289 °F	143 °C	ASTM D1525 ⁹

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Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	176 to 185 °F	80 to 85 °C
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr
Suggested Max Moisture	0.10 %	0.10 %
Suggested Shot Size	40 to 70 %	40 to 70 %
Rear Temperature	446 to 500 °F	230 to 260 °C
Middle Temperature	450 to 500 °F	232 to 260 °C
Front Temperature	455 to 500 °F	235 to 260 °C
Nozzle Temperature	428 to 500 °F	220 to 260 °C
Processing (Melt) Temp	428 to 500 °F	220 to 260 °C
Mold Temperature	160 to 180 °F	71 to 82 °C
Injection Rate	Fast	Fast
Back Pressure	75.0 to 150 psi	0.517 to 1.03 MPa

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Notes

- ¹ Procedure A
² Type I, 2.0 in/min (51 mm/min)
³ Single Gated
⁴ Double Gated
⁵ 2.0 in/min (51 mm/min)
⁶ single gate
⁷ double gate
⁸ Method I (3 point load), 0.050 in/min (1.3 mm/min)
⁹ Rate B (120°C/h), Loading 1 (10 N)

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/>.

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