

Technical Data Sheet

Diamond Aes 177

Acrylonitrile Ethylene Styrene
LyondellBasell Industries
Engineering Plastics

General			
Features	• Good Stiffness	• Good Weather Resistance	• High Impact Resistance
Agency Ratings	• EC 1907/2006 (REACH)	• EU 2002/96/EC (WEEE)	
RoHS Compliance	• RoHS Compliant		
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity	1.03	1.03 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) ¹ (220°C/10.0 Kg)	17 g/10 min	17 g/10 min	ASTM D1238

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength ²			ASTM D638
Yield, 73°F (23°C), 0.125 In (3.18 Mm), Injection Molded	5660 psi	39.0 MPa	
Flexural Modulus - Tangent ³			ASTM D790
73°F (23°C), 0.125 In (3.18 Mm), Injection Molded	335000 psi	2310 MPa	
Flexural Strength ³			ASTM D790
73°F (23°C), 0.125 In (3.18 Mm), Injection Molded	8830 psi	60.9 MPa	

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			ASTM D256
73°F (23°C), 0.125 In (3.18 Mm), Injection Molded	7.5 ft-lb/in	400 J/m	

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	171 °F	77.2 °C	
264 Psi (1.8 Mpa), Unannealed, 0.250 In (6.35 Mm), Injection Molded	184 °F	84.4 °C	

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Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	176 to 185 °F	80 to 85 °C
Drying Time	2.0 to 4.0 hr	2.0 to 4.0 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 509 °F	232 to 265 °C
Front Temperature	455 to 522 °F	235 to 272 °C
Nozzle Temperature	428 to 522 °F	220 to 272 °C
Processing (Melt) Temp	428 to 522 °F	220 to 272 °C
Mold Temperature	104 to 176 °F	40 to 80 °C
Injection Rate	Fast	Fast
Back Pressure	75.0 to 150 psi	0.517 to 1.03 MPa

Notes

- ¹ Procedure A
- ² Type I, 2.0 in/min (51 mm/min)
- ³ 0.050 in/min (1.3 mm/min)

Notes

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