

Technical Data Sheet

# Diamond Aes 202

Acrylonitrile Ethylene Styrene  
LyondellBasell Industries  
Engineering Plastics

General			
Features	• Good Stiffness	• Good Weather Resistance	• Medium 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			
--	1.09	1.09 g/cm <sup>3</sup>	ASTM D792
73°F (23°C)	1.09 g/cm <sup>3</sup>	1.09 g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (MFR)			ASTM D1238 ISO 1133
220°C/10.0 Kg	23 g/10 min	23 g/10 min	
230°C/3.8 Kg	8.6 g/10 min	8.6 g/10 min	

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength - Flow			
Yield, 73°F (23°C), Injection Molded <sup>1</sup>	7310 psi	50.4 MPa	ASTM D638
Yield, 73°F (23°C), Injection Molded	7060 psi	48.7 MPa	ISO 527-2/50
Flexural Modulus - Chord, Flow			
73°F (23°C), Injection Molded	436000 psi	3010 MPa	ASTM D790
73°F (23°C), Injection Molded	432000 psi	2980 MPa	ISO 178
Flexural Strength			ASTM D790
73°F (23°C), Injection Molded	10500 psi	72.5 MPa	

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179
-22°F (-30°C), Injection Molded	1.7 ft·lb/in <sup>2</sup>	3.7 kJ/m <sup>2</sup>	
73°F (23°C), Injection Molded	4.7 ft·lb/in <sup>2</sup>	9.8 kJ/m <sup>2</sup>	
Notched Izod Impact			
Flow : -22°F (-30°C), Injection Molded	0.76 ft·lb/in	41 J/m	ASTM D256
Flow : 73°F (23°C), Injection Molded	2.3 ft·lb/in	120 J/m	ASTM D256
-22°F (-30°C), Injection Molded	1.9 ft·lb/in <sup>2</sup>	3.9 kJ/m <sup>2</sup>	ISO 180
73°F (23°C), Injection Molded	4.5 ft·lb/in <sup>2</sup>	9.5 kJ/m <sup>2</sup>	ISO 180

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
66 Psi (0.45 Mpa), Unannealed, 0.125 In (3.18 Mm), Injection Molded	193 °F	89.7 °C	ASTM D648
66 Psi (0.45 Mpa), Unannealed	194 °F	90.1 °C	ISO 75-2/B
264 Psi (1.8 Mpa), Unannealed, 0.125 In (3.18 Mm), Injection Molded	172 °F	78.0 °C	ASTM D648
264 Psi (1.8 Mpa), Unannealed	172 °F	77.8 °C	ISO 75-2/A
Vicat Softening Temperature			
--	215 °F	102 °C	ASTM D1525
--	212 °F	99.8 °C	ISO 306
CLTE			ISO 11359-2
Flow : -22 To 176°F (-30 To 80°C)	4.4E-5 in/in/°F	7.9E-5 cm/cm/°C	
Transverse : -22 To 176°F (-30 To 80°C)	3.7E-5 in/in/°F	6.6E-5 cm/cm/°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**

<sup>1</sup> 2.0 in/min (50 mm/min)

**Notes**

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