

Technical Data Sheet

Diamond Abs 3501

Acrylonitrile Butadiene Styrene
 LyondellBasell Industries
 Engineering Plastics

General	
Features	• High Impact Resistance
Agency Ratings	• EC 1907/2006 (REACH) • EU 2002/96/EC (WEEE)
RoHS Compliance	• RoHS Compliant
UL File Number	• E51193
Forms	• Pellets
Processing Method	• Injection Molding

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity	1.05	1.05 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) ¹			ASTM D1238
200°C/5.0 Kg	2.0 g/10 min	2.0 g/10 min	
230°C/3.8 Kg	5.0 g/10 min	5.0 g/10 min	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength ² (Yield)	6500 psi	44.8 MPa	ASTM D638
Flexural Modulus - Tangent ³	328000 psi	2260 MPa	ASTM D790
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			ASTM D256
73°F (23°C), 0.125 In (3.18 Mm)	5.7 ft·lb/in	300 J/m	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness (R-scale)	106	106	ASTM D785
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)	171 °F	77.2 °C	
264 Psi (1.8 Mpa), Annealed, 0.125 In (3.18 Mm)	201 °F	93.9 °C	
Vicat Softening Temperature	219 °F	104 °C	ASTM D1525 ⁴
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating (0.06 In (1.5 Mm))	HB	HB	UL 94

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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 %
Rear Temperature	374 to 482 °F	190 to 250 °C
Middle Temperature	374 to 482 °F	190 to 250 °C
Front Temperature	374 to 482 °F	190 to 250 °C
Mold Temperature	104 to 176 °F	40 to 80 °C
Injection Rate	Moderate-Fast	Moderate-Fast

Notes

- ¹ Procedure A
- ² 2.0 in/min (51 mm/min)
- ³ 0.050 in/min (1.3 mm/min)
- ⁴ Loading 1 (10 N)

Notes

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