

Technical Data Sheet

**Diamond Asa S190**

Acrylonitrile Styrene Acrylate
LyondellBasell Industries
Engineering Plastics

General

Material Status	• Commercial: Active
Availability	• North America
Features	• Good Weather Resistance • Ultra High Impact Resistance
Forms	• Pellets
Processing Method	• Injection Molding

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity	1.07	1.07 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) ¹			ASTM D1238
200°C/5.0 kg	0.90 g/10 min	0.90 g/10 min	
230°C/3.8 kg	2.7 g/10 min	2.7 g/10 min	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength ² (Yield)	5100 psi	35.2 MPa	ASTM D638
Flexural Modulus - Tangent ³	273000 psi	1880 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)	8.5 ft·lb/in	450 J/m	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness (R-Scale)	88	88	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)	162 °F	72.2 °C	
264 psi (1.8 MPa), Annealed, 0.125 in (3.18 mm)	196 °F	91.1 °C	
Vicat Softening Temperature	212 °F	100 °C	ASTM D1525 ⁴

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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

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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.

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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