

Technical Data Sheet



Diamond Asa S130

Acrylonitrile Styrene Acrylate
LyondellBasell Industries
Engineering Plastics

General			
Material Status	• Commercial: Active		
Availability	• North America		
Features	• Good Stiffness	• Good Weather Resistance	• Medium 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
73°F (23°C)	1.07 g/cm ³	1.07 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)			
220°C/10.0 kg ¹	28 g/10 min	28 g/10 min	ASTM D1238
230°C/3.8 kg ¹	8.4 g/10 min	8.4 g/10 min	ASTM D1238
220°C/10.0 kg	28 g/10 min	28 g/10 min	ISO 1133
230°C/3.8 kg	8.4 g/10 min	8.4 g/10 min	ISO 1133
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength - Flow ²			
Yield, 73°F (23°C), Injection Molded	7590 psi	52.3 MPa	ASTM D638
Yield, 73°F (23°C), Injection Molded	7400 psi	51.0 MPa	ISO 527
Flexural Modulus - Chord, Flow			
73°F (23°C), Injection Molded	392000 psi	2700 MPa	ASTM D790
73°F (23°C), Injection Molded	405000 psi	2790 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179
-22°F (-30°C), Injection Molded	2.0 ft·lb/in ²	4.1 kJ/m ²	
73°F (23°C), Injection Molded	4.0 ft·lb/in ²	8.4 kJ/m ²	
Notched Izod Impact			
Flow : -22°F (-30°C), Injection Molded	1.4 ft·lb/in	75 J/m	ASTM D256
Flow : 73°F (23°C), Injection Molded	2.1 ft·lb/in	110 J/m	ASTM D256
-22°F (-30°C), Injection Molded	2.0 ft·lb/in ²	4.2 kJ/m ²	ISO 180
73°F (23°C), Injection Molded	4.1 ft·lb/in ²	8.6 kJ/m ²	ISO 180
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness			
R-Scale, 73°F (23°C), Injection Molded	110	110	ASTM D785
R-Scale, 73°F (23°C)	111	111	ISO 2039-2
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
66 psi (0.45 MPa), Unannealed	194 °F	89.9 °C	ASTM D648 ISO 75-2/B
264 psi (1.8 MPa), Unannealed, 0.125 in (3.18 mm)	172 °F	78.0 °C	ASTM D648
264 psi (1.8 MPa), Unannealed	170 °F	76.8 °C	ISO 75-2/A
Vicat Softening Temperature	214 °F	101 °C	ASTM D1525 ISO 306
CLTE			ISO 11359-2
Flow : -22 to 176°F (-30 to 80°C)	4.3E-5 in/in/°F	7.8E-5 cm/cm/°C	
Transverse : -22 to 176°F (-30 to 80°C)	4.8E-5 in/in/°F	8.6E-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

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Notes

¹ Procedure A

² 2.0 in/min (50 mm/min)

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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