

Technical Data Sheet



Diamond Asa C1030H

Acrylonitrile Styrene Acrylate
LyondellBasell Industries
Engineering Plastics

Product Description

Diamond ASA C1030H is a High-Heat Acrylonitrile Styrene Acrylate (ASA) product with excellent Heat-Aging and Weathering properties; Very High Gloss; High Distinctiveness of Image (DOI). ASA C1030H is readily processed by Extrusion and Injection Molding and is available in North America.

General

Material Status	• Commercial: Active		
Availability	• North America		
Features	• Good Colorability	• Good Weather Resistance	• High Gloss
Processing Method	• Extrusion	• Injection Molding	

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity ¹	1.08	1.08 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
220°C/10.0 kg ²	6.0 g/10 min	6.0 g/10 min	
230°C/3.8 kg	1.4 g/10 min	1.4 g/10 min	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			ASTM D638
Yield ³	6960 psi	48.0 MPa	
Break ⁴	5510 psi	38.0 MPa	
Tensile Elongation ³ (Break)	28 %	28 %	ASTM D638
Flexural Modulus - 1% Secant ⁵ (0.125 in (3.18 mm))	362000 psi	2500 MPa	ASTM D790
Flexural Strength ⁵ (Yield)	4900 psi	33.8 MPa	ASTM D790
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact (73°F (23°C))	3.3 ft·lb/in	180 J/m	ASTM D256
Instrumented Dart Impact ⁶			ASTM D3763
Total Energy	372 in·lb	42.0 J	
-4°F (-20°C), Total Energy	53.1 in·lb	6.00 J	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness (R-Scale)	101	101	ASTM D785
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed, Injection Molded	208 °F	98.0 °C	
264 psi (1.8 MPa), Unannealed	183 °F	84.0 °C	
Vicat Softening Temperature			
--	234 °F	112 °C	ASTM D1525 ⁷
--	210 °F	99.0 °C	ASTM D1525 ⁸

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Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	176 to 185 °F	80 to 85 °C
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr
Suggested Max Moisture	0.02 %	0.02 %
Suggested Shot Size	40 to 70 %	40 to 70 %
Rear Temperature	446 to 500 °F	230 to 260 °C
Middle Temperature	450 to 500 °F	232 to 260 °C
Front Temperature	455 to 500 °F	235 to 260 °C
Nozzle Temperature	428 to 500 °F	220 to 260 °C
Processing (Melt) Temp	428 to 500 °F	220 to 260 °C
Mold Temperature	160 to 180 °F	71 to 82 °C
Injection Rate	Fast	Fast
Back Pressure	75.0 to 150 psi	0.517 to 1.03 MPa

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Notes

¹ ASTM D792A

² Procedure A

³ Type I, 2.0 in/min (50 mm/min)

⁴ 2.0 in/min (50 mm/min)

⁵ 0.079 in/min (2.0 mm/min)

⁶ 22.0 ft/sec (6.70 m/sec)

⁷ Loading 1 (10 N)

⁸ Rate B (120°C/h), Loading 2 (50 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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