

Technical Data Sheet



Diamond Asa TWP502

Acrylonitrile Styrene Acrylate
LyondellBasell Industries
Engineering Plastics

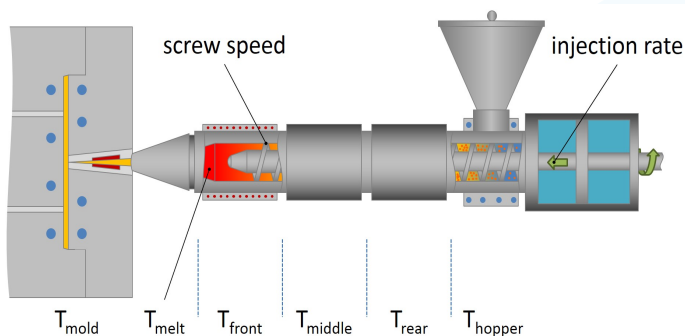
General			
Material Status	• Commercial: Active		
Availability	• North America		
Features	• Good Weather Resistance		
Forms	• Pellets		
Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity	1.12	1.12 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) ¹			ASTM D1238
200°C/5.0 kg	1.3 g/10 min	1.3 g/10 min	
230°C/3.8 kg	3.9 g/10 min	3.9 g/10 min	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength ² (Yield)	5050 psi	34.8 MPa	ASTM D638
Flexural Modulus ³	195000 psi	1340 MPa	ASTM D790B
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact (0.125 in (3.18 mm))	2.0 ft-lb/in	110 J/m	ASTM D256A
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness (R-Scale)	98	98	ASTM D785
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed, 0.125 in (3.18 mm)	181 °F	82.8 °C	
66 psi (0.45 MPa), Annealed, 0.125 in (3.18 mm)	201 °F	93.9 °C	
264 psi (1.8 MPa), Unannealed, 0.125 in (3.18 mm)	156 °F	68.9 °C	
264 psi (1.8 MPa), Annealed, 0.125 in (3.18 mm)	187 °F	86.1 °C	
Vicat Softening Temperature	201 °F	93.9 °C	ASTM D1525 ⁴
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Light Transmittance (118.1 mil (3000 µm))	88.0 %	88.0 %	ASTM D1003
Haze (118.1 mil (3000 µm))	8.00 %	8.00 %	ASTM D1003

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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 Method I (3 point load), 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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