Technical Data Sheet

Diamond Asa S150

Acrylonitrile Styrene Acrylate
LyondellBasell Industries
Engineering Plastics

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

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity			
--	1.06	1.06 g/cm³	ASTM D792
73°f (23°c)	1.06 g/cm³	1.06 g/cm³	ISO 1183/A
Melt Mass-Flow Rate (MFR)			ASTM D1238 ISO 1133
220°c/10.0 Kg	15 g/10 min	15 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 - Flow			
Yield, 73°f (23°c), Injection Molded [1]	6240 psi	43.0 MPa	ASTM D638
Yield, 73°f (23°c), Injection Molded	6350 psi	43.8 MPa	ISO 527-2
Flexural Modulus - Chord, Flow			
73°f (23°c), Injection Molded	316000 psi	2180 MPa	ASTM D790
73°f (23°c), Injection Molded	315000 psi	2170 MPa	ISO 178
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Charpy Notched Impact Strength			ISO 179
-22°f (-30°c), Injection Molded	3.9 ft·lb/in²	8.2 kJ/m²	
73°f (23°c), Injection Molded	8.4 ft·lb/in²	18 kJ/m²	
Notched Izod Impact			
Flow : -22°f (-30°c), Injection Molded	2.0 ft·lb/in	110 J/m	ASTM D256
Flow : 73°f (23°c), Injection Molded	4.8 ft·lb/in	260 J/m	ASTM D256
-22°f (-30°c), Injection Molded	3.7 ft·lb/in²	7.8 kJ/m²	ISO 180
73°f (23°c), Injection Molded	9.8 ft·lb/in²	21 kJ/m²	ISO 180
Hardness	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Rockwell Hardness			ASTM D785
R-scale, 73°f (23°c), Injection Molded	100	100	

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Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
66 Psi (0.45 Mpa), Unannealed, Injection Molded	193 °F	89.2 °C	ASTM D648
66 Psi (0.45 Mpa), Unannealed	193 °F	89.3 °C	ISO 75-2/B
264 Psi (1.8 Mpa), Unannealed, 0.125 In (3.18 Mm), Injection Molded	170 °F	76.7 °C	ASTM D648
264 Psi (1.8 Mpa), Unannealed, 0.250 In (6.35 Mm)	181 °F	82.8 °C	ASTM D648
264 Psi (1.8 Mpa), Unannealed	170 °F	76.6 °C	ISO 75-2/A
Vicat Softening Temperature			
--	216 °F	102 °C	ASTM D1525 [2]
--	215 °F	102 °C	ISO 306
CLTE			ISO 11359-2
Flow : -22 To 176°f (-30 To 80°c)	5.2E-5 in/in/°F	9.3E-5 cm/cm/°C	
Transverse : -22 To 176°f (-30 To 80°c)	5.4E-5 in/in/°F	9.8E-5 cm/cm/°C	

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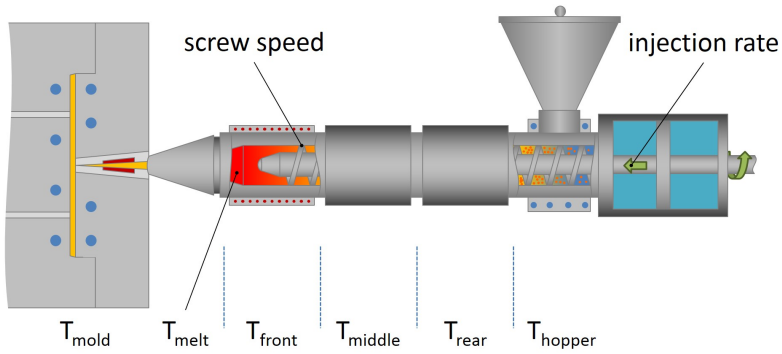

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	176 to 185 °F	80 to 85 °C
Drying Time	2.0 to 4.0 hr	2.0 to 4.0 hr
Suggested Max Moisture	0.10 %	0.10 %
Suggested Shot Size	40 to 70 %	40 to 70 %
Rear Temperature	446 to 500 °F	230 to 260 °C
Middle Temperature	450 to 509 °F	232 to 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

Notes

[1] 2.0 in/min (50 mm/min)

[2] Loading 1 (10 N)

Notes

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