Technical Data Sheet

Diamond Asa S130

Acrylonitrile Styrene Acrylate
LyondellBasell Industries
Engineering Plastics

General			
Features	• Good Stiffness	• Good Weather Resistance	• Medium 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			
--	1.07	1.07 g/cm³	ASTM D792
73°f (23°c)	1.07 g/cm³	1.07 g/cm³	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/in²	4.1 kJ/m²	
73°f (23°c), Injection Molded	4.0 ft·lb/in²	8.4 kJ/m²	
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/in²	4.2 kJ/m²	ISO 180
73°f (23°c), Injection Molded	4.1 ft·lb/in²	8.6 kJ/m²	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

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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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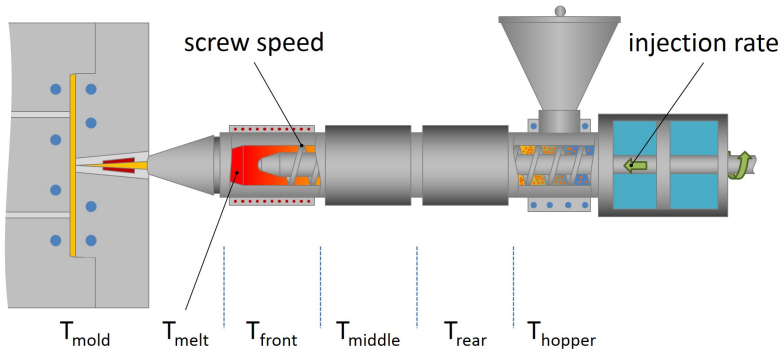

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	176 to 185 °F	80 to 85 °C
Drying Time	2.0 to 4.0 hr	2.0 to 4.0 hr
Suggested Max Moisture	0.10 %	0.10 %
Suggested Shot Size	40 to 70 %	40 to 70 %
Rear Temperature	446 to 500 °F	230 to 260 °C
Middle Temperature	450 to 509 °F	232 to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

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.