

Diamond AES 202 1806BLK

LyondellBasell Industries - Acrylonitrile Ethylene Styrene

General Information

Product Description

Diamond AES 202 1806BLK is a Acrylonitrile Ethylene Styrene material and is typically used in Injection Molding applications. Features include: Good Stiffness, Good Weather Resistance, and Medium Impact Resistance.

General

Features	<ul style="list-style-type: none"> • Good Stiffness • Good Weather Resistance • Medium Impact Resistance
Forms	<ul style="list-style-type: none"> • Pellets
Processing Method	<ul style="list-style-type: none"> • Injection Molding

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.09		ASTM D792
Density (73°F)	1.09	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)			ASTM D1238
220°C/10.0 kg	23	g/10 min	
230°C/3.8 kg	8.6	g/10 min	
Melt Mass-Flow Rate (MFR)			ISO 1133
220°C/10.0 kg	23	g/10 min	
230°C/3.8 kg	8.6	g/10 min	
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength - Flow ² (Yield, 73°F, Injection Molded)	7310	psi	ASTM D638
Tensile Stress - Flow (Yield, 73°F, Injection Molded)	7060	psi	ISO 527-2/50
Flexural Modulus - Chord, Flow (73°F, Injection Molded)	437000	psi	ASTM D790
Flexural Modulus - Chord, Flow (73°F, Injection Molded)	432000	psi	ISO 178
Flexural Strength (73°F, Injection Molded)	10500	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179
-22°F, Injection Molded	1.8	ft·lb/in ²	
73°F, Injection Molded	4.7	ft·lb/in ²	
Notched Izod Impact - Flow			ASTM D256
-22°F, Injection Molded	0.77	ft·lb/in	
73°F, Injection Molded	2.2	ft·lb/in	
Notched Izod Impact Strength			ISO 180
-22°F, Injection Molded	1.9	ft·lb/in ²	
73°F, Injection Molded	4.5	ft·lb/in ²	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi, Unannealed, 0.125 in, Injection Molded	193	°F	
Deflection Temperature Under Load (66 psi, Unannealed)	194	°F	ISO 75-2/B
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed, 0.125 in, Injection Molded	172	°F	
Deflection Temperature Under Load			ISO 75-2/A
264 psi, Unannealed	172	°F	
Vicat Softening Temperature	216	°F	ASTM D1525

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Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	212	°F	ISO 306
CLTE - Flow (-22 to 176°F)	4.4E-5	in/in/°F	ISO 11359-2
CLTE - Transverse (-22 to 176°F)	3.7E-5	in/in/°F	ISO 11359-2

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	176 to 185	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.10	%
Suggested Shot Size	40 to 70	%
Rear Temperature	446 to 500	°F
Middle Temperature	450 to 509	°F
Front Temperature	455 to 522	°F
Nozzle Temperature	428 to 522	°F
Processing (Melt) Temp	428 to 522	°F
Mold Temperature	104 to 176	°F
Injection Rate	Fast	
Back Pressure	75.0 to 149	psi

Notes

¹ Typical properties: these are not to be construed as specifications.

² 2.0 in/min