

LEXAN™ HF1110R resin

Polycarbonate

SABIC Innovative Plastics

Message:

High flow grade. Easy mold release version of LEXAN HF1110. For thin wall lighting lenses, data storage components and safety eyewear lenses.

General Information			
UL YellowCard	E121562-220945		
Features	Good Mold Release		
	Good Moldability		
	High Flow		
Uses	Lenses		
	Optical Data Storage		
	Safety Equipment		
	Thin-walled Parts		
Processing Method	Injection Molding		
Multi-Point Data	Coefficient of Thermal Expansion vs. Temperature (ASTM E831)		
	Flexural DMA (ASTM D4065)		
	Shear DMA (ASTM D4065)		
	Specific Heat vs. Temperature (ASTM D3417)		
	Tensile Fatigue		
	Tensile Stress vs. Strain (ASTM D638)		
	Thermal Conductivity vs. Temperature (ASTM E1530)		
Viscosity vs. Shear Rate (ASTM D3835)			
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	25	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.50 to 0.70	%	Internal Method
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹			ASTM D638
Yield	62.1	MPa	
Break	65.5	MPa	
Tensile Elongation ² (Break)	120	%	ASTM D638
Flexural Modulus ³ (50.0 mm Span)	2310	MPa	ASTM D790
Flexural Strength ⁴ (Yield, 50.0 mm Span)	93.1	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	640	J/m	ASTM D256

Instrumented Dart Impact (23°C, Energy at Peak Load)	54.2	J	ASTM D3763
Tensile Impact Strength ⁵	378	kJ/m ²	ASTM D1822
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed, 3.20 mm)	127	°C	ASTM D648
RTI Elec	130	°C	UL 746
RTI Imp	130	°C	UL 746
RTI Str	130	°C	UL 746
Electrical	Nominal Value		Test Method
Comparative Tracking Index (CTI)	PLC 2		UL 746
High Amp Arc Ignition (HAI)	PLC 1		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 2		UL 746
Hot-wire Ignition (HWI)	PLC 2		UL 746
Flammability	Nominal Value		Test Method
Flame Rating (1.09 mm)	V-2		UL 94
Optical	Nominal Value	Unit	Test Method
Transmittance (2540 µm)	88.0	%	ASTM D1003
Haze (2540 µm)	1.0	%	ASTM D1003
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	3.0 to 4.0	hr	
Drying Time, Maximum	48	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 60	%	
Rear Temperature	249 to 271	°C	
Middle Temperature	260 to 282	°C	
Front Temperature	271 to 293	°C	
Nozzle Temperature	266 to 288	°C	
Processing (Melt) Temp	271 to 293	°C	
Mold Temperature	71.1 to 93.3	°C	
Back Pressure	0.345 to 0.689	MPa	
Screw Speed	40 to 70	rpm	
Vent Depth	0.025 to 0.076	mm	
NOTE			
1.	Type I, 50 mm/min		
2.	Type I, 50 mm/min		
3.	1.3 mm/min		
4.	1.3 mm/min		
5.	Type S		

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