LEXAN™ HFD1014 resin

Polycarbonate

SABIC Innovative Plastics

Message:

7 MFR LEXAN HFD Copolymer

General Information			
UL YellowCard	E207780-100912743		
Features	Copolymer		
Processing Method	Injection molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.20	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	7.0	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	6.50	cm³/10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.50 - 0.70	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.30	%	ISO 62
Equilibrium, 23°C, 50% RH	0.15	%	ISO 62
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (R-Scale)	120		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			
-- [1]	2260	MPa	ASTM D638
--	2080	MPa	ISO 527-2/1
Tensile Strength			
Yield [2]	58.0	MPa	ASTM D638
Yield	60.0	MPa	ISO 527-2/50
Fracture [3]	67.0	MPa	ASTM D638
Fracture	73.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield [4]	6.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Fracture [5]	140	%	ASTM D638
Fracture	140	%	ISO 527-2/50
Flexural Modulus			
50.0mm span [6]	2240	MPa	ASTM D790
-- [7]	2070	MPa	ISO 178
Flexural Stress			
--	89.0	MPa	ISO 178

Yield, 50.0mm span [8]	98.0	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength [9]			ISO 179/1eA
-30°C	69	kJ/m²	ISO 179/1eA
23°C	82	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength [10]			ISO 179/1eU
-30°C	No Break		ISO 179/1eU
23°C	No Break		ISO 179/1eU
Notched Izod Impact			
-30°C	900	J/m	ASTM D256
23°C	970	J/m	ASTM D256
-30°C [11]	63	kJ/m²	ISO 180/1A
23°C [12]	72	kJ/m²	ISO 180/1A
Unnotched Izod Impact Strength [13]			ISO 180/1U
-30°C	No Break		ISO 180/1U
23°C	No Break		ISO 180/1U
Instrumented Dart Impact			
23°C, Total Energy	78.0	J	ASTM D3763
--	134	J	ISO 6603-2
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	125	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	115	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span [14]	115	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	136	°C	ASTM D1525 [15]
--	130	°C	ISO 306/B50
--	131	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			ASTM E831, ISO 11359-2
Flow: -40 to 40°C	8.0E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	8.0E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Optical	**Nominal Value**	**Unit**	**Test Method**
Refractive Index	1.582		ASTM D542
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 - 4.0	hr	
Drying Time, Maximum	48	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 - 60	%	

Rear Temperature	271 - 293	°C
Middle Temperature	282 - 304	°C
Front Temperature	293 - 316	°C
Nozzle Temperature	288 - 310	°C
Processing (Melt) Temp	293 - 316	°C
Mold Temperature	71.1 - 93.3	°C
Back Pressure	0.345 - 0.689	MPa
Screw Speed	40 - 70	rpm
Vent Depth	0.025 - 0.076	mm

NOTE	
1.	5.0 mm/min
2.	Type 1, 50mm/min
3.	Type 1, 50mm/min
4.	Type 1, 50mm/min
5.	Type 1, 50mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	1.3 mm/min
9.	80*10*3 sp=62mm
10.	80*10*3 sp=62mm
11.	80*10*3
12.	80*10*3
13.	80*10*3
14.	80*10*4 mm
15.	标准 B (120°C/h), 载荷2 (50N)

Recommended distributors for this material

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