LEXAN™ CFR9131 resin

Polycarbonate

SABIC Innovative Plastics

Message:

LEXAN CFR9131 Polycarbonate (PC) resin is a non-filled, injection moldable grade. This non-chlorinated, non-brominated flame retardant PC has an UL-94 V0 rating at 1.5 mm, high flow capability and is UV stabilized providing additional weathering capability. LEXAN CFR9131 is available in clear transparent and tinted color options that is an excellent candidate for a wide variety of applications.

General Information			
UL YellowCard	E121562-101047383		
Additive	UV Stabilizer		
Features	Bromine Free Chlorine Free Flame Retardant Good Weather Resistance		
Appearance	Clear/Transparent Colors Available		
Processing Method	Injection Molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity			
--	1.19	g/cm³	ASTM D792
--	1.20	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	18	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	17.0	cm³/10min	ISO 1133
Molding Shrinkage			Internal Method
Flow : 3.20 mm	0.55 to 0.75	%	
Across Flow : 3.20 mm	0.60 to 0.80	%	
Water Absorption			ISO 62
Saturation, 23°C	0.13	%	
Equilibrium, 23°C, 50% RH	0.11	%	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			
-- [1]	2400	MPa	ASTM D638
--	2300	MPa	ISO 527-2/1
Tensile Strength			
Yield [2]	67.0	MPa	ASTM D638
Yield	63.0	MPa	ISO 527-2/50
Break [3]	54.0	MPa	ASTM D638

Break	57.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield [4]	6.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Break [5]	80	%	ASTM D638
Break	73	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span [6]	2400	MPa	ASTM D790
-- [7]	2400	MPa	ISO 178
Flexural Stress			
--	96.0	MPa	ISO 178
Yield, 50.0 mm Span [8]	103	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength [9]			ISO 179/1eA
-30°C	9.0	kJ/m^2	
23°C	10	kJ/m^2	
Charpy Unnotched Impact Strength [10]			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact			
-30°C	85	J/m	ASTM D256
23°C	100	J/m	ASTM D256
-30°C [11]	9.0	kJ/m^2	ISO 180/1A
23°C [12]	10	kJ/m^2	ISO 180/1A
Unnotched Izod Impact			ASTM D4812, ISO 180/1U
-30°C	No Break		
23°C	No Break		
Instrumented Dart Impact (23°C, Total Energy)	65.0	J	ASTM D3763
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	130	°C	ASTM D648
0.45 MPa, Unannealed, 100 mm Span [13]	131	°C	ISO 75-2/Be
1.8 MPa, Unannealed, 3.20 mm	120	°C	ASTM D648
1.8 MPa, Unannealed, 100 mm Span [14]	121	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	136	°C	ASTM D1525 [15]
--	139	°C	ISO 306/B50
--	140	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE			
Flow : -40 to 40°C	6.8E-5	cm/cm/°C	ASTM E831

Flow : 23 to 80°C	7.7E-5	cm/cm/°C	ISO 11359-2
Transverse : -40 to 40°C	7.0E-5	cm/cm/°C	ASTM E831
Transverse : 23 to 80°C	8.0E-5	cm/cm/°C	ISO 11359-2
RTI Elec	130	°C	UL 746
RTI Imp	120	°C	UL 746
RTI Str	130	°C	UL 746
Electrical	**Nominal Value**	**Unit**	**Test Method**
Dielectric Constant (1.10 GHz)	2.78		ASTM ES7-83
Dissipation Factor (1.10 GHz)	5.6E-3		ASTM ES7-83
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
0.400 mm	V-2		
1.50 mm	V-0		
Glow Wire Flammability Index (1.50 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (1.50 mm)	850	°C	IEC 60695-2-13
Optical	**Nominal Value**	**Unit**	**Test Method**
Transmittance			Internal Method
1000 µm	> 90.0	%	
2000 µm	> 89.0	%	
3000 µm	> 88.0	%	
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	260 to 282	°C	
Middle Temperature	271 to 293	°C	
Front Temperature	282 to 304	°C	
Nozzle Temperature	277 to 299	°C	
Processing (Melt) Temp	282 to 304	°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.	50 mm/min		
2.	Type I, 50 mm/min		
3.	Type I, 50 mm/min		
4.	Type I, 50 mm/min		
5.	Type I, 50 mm/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.	120*10*4 mm
14.	120*10*4 mm
15.	Rate B (120°C/h), Loading 2 (50 N)

Recommended distributors for this material

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