

LEXAN™ CFR7630 resin

Polycarbonate

SABIC Innovative Plastics

Message:

LEXAN CFR7630 Polycarbonate (PC) resin is a non-filled resin, suitable for injection molding and extrusion. This non-chlorinated, non-brominated flame retardant PC has an UL-94 V0 rating at 1.0 mm / 5VA rating at 3.0mm and is UV stabilized (F1 rating) providing additional weathering capability. LEXAN CFR7630 resin is available in transparent and opaque colors.

General Information			
UL YellowCard	E45329-100922724		
Additive	UV stabilizer		
Features	Chlorine Free		
	Good weather resistance		
	Bromine-free		
	Flame retardancy		
RoHS Compliance	RoHS compliance		
Appearance	Available colors		
	Clear/transparent		
Processing Method	Extrusion		
	Injection molding		

Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.19	g/cm ³	ASTM D792
--	1.20	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	5.0	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	5.00	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal method
Flow: 3.20mm	0.55 - 0.75	%	Internal method
Transverse flow: 3.20mm	0.60 - 0.80	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.14	%	ISO 62
Equilibrium, 23°C, 50% RH	0.11	%	ISO 62
Outdoor Suitability	f1		UL 746C

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2500	MPa	ASTM D638
--	2400	MPa	ISO 527-2/1

Tensile Strength			
Yield ²	68.0	MPa	ASTM D638
Yield	67.0	MPa	ISO 527-2/50
Fracture ³	52.0	MPa	ASTM D638
Fracture	52.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	6.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Fracture ⁵	51	%	ASTM D638
Fracture	23	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁶	2400	MPa	ASTM D790
-- ⁷	2500	MPa	ISO 178
Flexural Stress			
--	103	MPa	ISO 178
Yield, 50.0mm span ⁸	106	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
-30°C	9.0	kJ/m ²	ISO 179/1eA
23°C	10	kJ/m ²	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	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		ASTM D4812, ISO 180/1U
23°C	No Break		ASTM D4812, ISO 180/1U
Instrumented Dart Impact (23°C, Total Energy)	66.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	131	°C	ASTM D648
0.45 MPa, unannealed, 100 mm span ¹³	131	°C	ISO 75-2/Be
1.8 MPa, unannealed, 3.20mm	120	°C	ASTM D648
1.8 MPa, unannealed, 100 mm span ¹⁴	120	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	136	°C	ASTM D1525 ¹⁵
--	137	°C	ISO 306/B50

--	139	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			
Flow: -40 to 40°C	6.6E-5	cm/cm/°C	ASTM E831
Flow: 23 to 80°C	7.2E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	7.0E-5	cm/cm/°C	ASTM E831
Lateral: 23 to 80°C	7.6E-5	cm/cm/°C	ISO 11359-2
RTI Elec	125	°C	UL 746
RTI Imp	120	°C	UL 746
RTI	125	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Dielectric Constant (1.10 GHz)	2.79		ASTM E57-83
Dissipation Factor (1.10 GHz)	5.8E-3		ASTM E57-83
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.00 mm	V-0		UL 94
3.00 mm	5VA		UL 94
Glow Wire Flammability Index (1.00 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (1.00 mm)	875	°C	IEC 60695-2-13
Oxygen Index	45	%	ISO 4589-2
Optical	Nominal Value	Unit	Test Method
Transmittance			Internal method
1000 µm	> 90.0	%	Internal method
2000 µm	> 89.0	%	Internal method
3000 µm	> 88.0	%	Internal method
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	266 - 288	°C	
Middle Temperature	277 - 299	°C	
Front Temperature	288 - 310	°C	
Nozzle Temperature	282 - 304	°C	
Processing (Melt) Temp	288 - 310	°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.	50 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.	120*10*4 mm
14.	120*10*4 mm
15.	标准 B (120°C/h), 载荷2 (50N)

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

