

LEXAN™ LSHF resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

Clear PolyCarbonate, High Flow, UV Stabilization, Heat Stabilization

General Information			
Additive	Heat Stabilizer		
	UV Stabilizer		
Features	Heat Stabilized		
	High Flow		
Appearance	Clear/Transparent		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	25	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	24.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Flow ¹	0.50 to 0.70	%	
Flow : 3.20 mm	0.50 to 0.70	%	
Across Flow : 3.20 mm	0.50 to 0.70	%	
Water Absorption			ISO 62
Saturation, 23°C	0.35	%	
Equilibrium, 23°C, 50% RH	0.15	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ²	2380	MPa	ASTM D638
--	2350	MPa	ISO 527-2/1
Tensile Strength			
Yield ³	62.1	MPa	ASTM D638
Yield	63.0	MPa	ISO 527-2/50
Break ⁴	65.5	MPa	ASTM D638
Break	50.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁵	6.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Break ⁶	110	%	ASTM D638

Break	70	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁷	2310	MPa	ASTM D790
-- ⁸	2300	MPa	ISO 178
Flexural Stress			
--	90.0	MPa	ISO 178
Yield, 50.0 mm Span ⁹	93.1	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ¹⁰			ISO 179/1eA
-30°C	12	kJ/m ²	
23°C	60	kJ/m ²	
Charpy Unnotched Impact Strength ¹¹			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact			
23°C	640	J/m	ASTM D256
-30°C ¹²	11	kJ/m ²	ISO 180/1A
23°C ¹³	60	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹⁴			ISO 180/1U
-30°C	No Break		
23°C	No Break		
Instrumented Dart Impact			ASTM D3763
23°C, Energy at Peak Load	54.2	J	
23°C, Total Energy	60.0	J	
Tensile Impact Strength ¹⁵	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
1.8 MPa, Unannealed, 6.40 mm	127	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹⁶	122	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	138	°C	ASTM D1525 ¹⁷
--	139	°C	ISO 306/B50
--	140	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE			
Flow : -30 to 30°C	7.0E-5	cm/cm/°C	ASTM D696
Flow : 23 to 80°C	7.0E-5	cm/cm/°C	ISO 11359-2
Transverse : -30 to 30°C	7.0E-5	cm/cm/°C	ASTM D696
Transverse : 23 to 80°C	7.0E-5	cm/cm/°C	ISO 11359-2
Optical	Nominal Value	Unit	Test Method
Transmittance (2540 µm)	88.0	%	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. Tensile Bar
2. 5.0 mm/min
3. Type I, 50 mm/min
4. Type I, 50 mm/min
5. Type I, 50 mm/min
6. Type I, 50 mm/min
7. 1.3 mm/min
8. 2.0 mm/min
9. 1.3 mm/min
10. 80*10*3 sp=62mm
11. 80*10*3 sp=62mm
12. 80*10*3
13. 80*10*3
14. 80*10*3
15. Type S
16. 80*10*4 mm
17. Rate B (120°C/h), Loading 2 (50 N)

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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

