

LEXAN™ 133R resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

LEXAN 133R is the highest viscosity, UV stabilized, release containing, linear polycarbonate grade. Suitable for injection molding and extrusion processes. Available in transparent and multiple colors.

General Information			
UL YellowCard	E45329-101309788		
Additive	demoulding		
	UV stabilizer		
Features	Linear polymer structure		
	Viscosity, High		
RoHS Compliance	RoHS compliance		
Appearance	Available colors		
	Clear/transparent		
Processing Method	Profile extrusion molding		
Physical	Nominal Value	Unit	Test Method
Density	1.20	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	3.00	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow ¹	0.50 - 0.70	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.35	%	ISO 62
Equilibrium, 23°C, 50% RH	0.15	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 358/30)	95.0	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2350	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield	63.0	MPa	ISO 527-2/50
Fracture	70.0	MPa	ISO 527-2/50
Tensile Strain			ISO 527-2/50
Yield	7.0	%	ISO 527-2/50
Fracture	120	%	ISO 527-2/50
Flexural Modulus ²	2300	MPa	ISO 178
Flexural Stress	90.0	MPa	ISO 178

Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	10.0	mg	Internal method
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			
-30°C ³	16	kJ/m ²	ISO 179/1eA
23°C ⁴	80	kJ/m ²	ISO 179/1eA
23°C	35	kJ/m ²	ISO 179/2C
Charpy Unnotched Impact Strength ⁵			ISO 179/1eU
-30°C	No Break		ISO 179/1eU
23°C	No Break		ISO 179/1eU
Notched Izod Impact ⁶			ISO 180/1A
-30°C	13	kJ/m ²	ISO 180/1A
23°C	75	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ⁷			ISO 180/1U
-30°C	No Break		ISO 180/1U
23°C	No Break		ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ⁸			
0.45 MPa, unannealed, 100 mm span	139	°C	ISO 75-2/Be
1.8 MPa, unannealed, 100 mm span	128	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	144	°C	ISO 306/B50
--	145	°C	ISO 306/B120
Ball Pressure Test			IEC 60695-10-2
125°C	Pass		IEC 60695-10-2
140°C ⁹	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			ISO 11359-2
Flow: 23 to 80°C	7.0E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	7.0E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.20	W/m/K	ISO 8302
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms · cm	IEC 60093
Dielectric Strength			IEC 60243-1
1.00 mm ¹⁰	17	kV/mm	IEC 60243-1
3.20mm, in oil	17	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	2.70		IEC 60250
60 Hz	2.70		IEC 60250
1 MHz	2.70		IEC 60250
Dissipation Factor			IEC 60250
50 Hz	1.0E-3		IEC 60250

60 Hz	1.0E-3		IEC 60250
1 MHz	0.010		IEC 60250
Comparative Tracking Index	250	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Glow Wire Flammability Index (1.00 mm)	850	°C	IEC 60695-2-12
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.586		ISO 489
Transmittance (2540 μm)	88.0 - 90.0	%	ASTM D1003
Haze (2540 μm)	< 0.80	%	ASTM D1003
Extrusion	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	2.0 - 4.0	hr	
Hopper Temperature	40.0 - 60.0	°C	
Cylinder Zone 1 Temp.	260 - 280	°C	
Cylinder Zone 2 Temp.	260 - 280	°C	
Cylinder Zone 3 Temp.	260 - 280	°C	
Cylinder Zone 4 Temp.	260 - 280	°C	
Adapter Temperature	260 - 280	°C	
Melt Temperature	270 - 280	°C	
Die Temperature	250 - 260	°C	
Calibration Temp, First	70.0 - 90.0	°C	
NOTE			
1.	Tensile Bar		
2.	2.0 mm/min		
3.	80*10*3 sp=62mm		
4.	80*10*3 sp=62mm		
5.	80*10*3 sp=62mm		
6.	80*10*3		
7.	80*10*3		
8.	120*10*4 mm		
9.	Approximate maximum		
10.	Short-Time		

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