

LEXAN™ 923 resin

Polycarbonate

SABIC Innovative Plastics

Message:

LEXAN 923 is a low viscosity flame retardant, UV-stabilized grade, especially suitable for electrical applications.

General Information			
UL YellowCard	E45329-236668		
Additive	UV stabilizer		
	Flame retardancy		
Features	Low viscosity		
	Flame retardancy		
Uses	Electrical/Electronic Applications		
RoHS Compliance	RoHS compliance		
Processing Method	Injection 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)	21.0	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
Rockwell Hardness (R-Scale)	118		ISO 2039-2
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	60.0	MPa	ISO 527-2/50
Tensile Strain			ISO 527-2/50
Yield	6.0	%	ISO 527-2/50
Fracture	85	%	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	11	kJ/m ²	ISO 179/1eA
23°C ⁴	60	kJ/m ²	ISO 179/1eA
23°C	25	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	10	kJ/m ²	ISO 180/1A
23°C	60	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	133	°C	ISO 75-2/Be
1.8 MPa, unannealed, 100 mm span	122	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	140	°C	ISO 306/B50
--	141	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE - Flow (23 to 80°C)	7.0E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.20	W/m/K	ISO 8302
RTI Elec	130	°C	UL 746
RTI Imp	120	°C	UL 746
RTI	125	°C	UL 746
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 (3.20 mm, 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	225	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.00 mm)	V-0		UL 94
Glow Wire Flammability Index			IEC 60695-2-12

1.00 mm	850	°C	IEC 60695-2-12
1.60 mm	960	°C	IEC 60695-2-12
Oxygen Index	35	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	60.0 - 80.0	°C	
Rear Temperature	260 - 280	°C	
Middle Temperature	270 - 290	°C	
Front Temperature	280 - 300	°C	
Nozzle Temperature	270 - 290	°C	
Processing (Melt) Temp	280 - 300	°C	
Mold Temperature	80.0 - 100	°C	

NOTE

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|----|-----------------|
| 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 |

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