

LEXAN™ 943 resin

Thursday, February 16, 2017

General Information

Product Description

LEXAN 943 is a medium viscosity flame retardant, UV-stabilized grade, especially suitable for electrical applications.

General

Material Status	• Commercial: Active
Availability	• Europe
Additive	• Flame Retardant • UV Stabilizer
Features	• Flame Retardant • Medium Viscosity
Uses	• Electrical/Electronic Applications
RoHS Compliance	• RoHS Compliant
Processing Method	• Injection Molding

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.20	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	9.50	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow ²	0.50 to 0.70	%	Internal Method
Water Absorption (Saturation, 23°C)	0.35	%	ISO 62
Water Absorption (Equilibrium, 23°C, 50% RH)	0.15	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2350	MPa	ISO 527-2/1
Tensile Stress (Yield)	63.0	MPa	ISO 527-2/50
Tensile Stress (Break)	60.0	MPa	ISO 527-2/50
Tensile Strain (Yield)	6.0	%	ISO 527-2/50
Tensile Strain (Break)	85	%	ISO 527-2/50
Flexural Modulus ³	2300	MPa	ISO 178
Flexural Stress ^{3,4}	90.0	MPa	ISO 178
Taber Abrasion Resistance			Internal Method
1000 Cycles, 1000 g, CS-17 Wheel	10.0	mg	
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			
-30°C ⁵	14	kJ/m ²	ISO 179/1eA
23°C ⁵	73	kJ/m ²	ISO 179/1eA
23°C	30	kJ/m ²	ISO 179/2C
Charpy Unnotched Impact Strength ⁵			ISO 179/1eU
-30°C	No Break		
23°C	No Break		

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SABIC Innovative Plastics Europe - Polycarbonate

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength ⁶			ISO 180/1A
-30°C	12	kJ/m ²	
23°C	70	kJ/m ²	
Unnotched Izod Impact Strength ⁶			ISO 180/1U
-30°C	No Break		
23°C	No Break		
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 358/30)	95.0	MPa	ISO 2039-1
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ⁷			ISO 75-2/Be
0.45 MPa, Unannealed, 100 mm Span	136	°C	
Heat Deflection Temperature ⁷			ISO 75-2/Ae
1.8 MPa, Unannealed, 100 mm Span	125	°C	
Vicat Softening Temperature			
--	141	°C	ISO 306/B50
--	142	°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 Str	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
Electric Strength (3.20 mm, in Oil)	17	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	2.70		
60 Hz	2.70		
1 MHz	2.70		
Dissipation Factor			IEC 60250
50 Hz	1.0E-3		
60 Hz	1.0E-3		
1 MHz	0.010		
Comparative Tracking Index	225	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.0 mm)	V-0		UL 94
Glow Wire Flammability Index			IEC 60695-2-12
1.0 mm	850	°C	
1.6 mm	960	°C	
Oxygen Index	35	%	ISO 4589-2

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Processing Information

Injection	Nominal Value	Unit
Drying Temperature	120	°C
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.020	%
Hopper Temperature	60 to 80	°C
Rear Temperature	260 to 280	°C
Middle Temperature	270 to 290	°C
Front Temperature	280 to 300	°C
Nozzle Temperature	270 to 290	°C
Processing (Melt) Temp	280 to 300	°C
Mold Temperature	80 to 100	°C

Notes

¹ Typical properties: these are not to be construed as specifications.

² Tensile Bar

³ 2.0 mm/min

⁴ Yield

⁵ 80*10*3 sp=62mm

⁶ 80*10*3

⁷ 120*10*4 mm

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