

LEXAN™ R9453 resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

LEXAN R9453 Polycarbonate (PC) is a non-filled, non-chlorine and non-brominate flame retardant resin for general purpose, which contains 30% post-consumer recycled PC. This resin is of UL-94 V0 rating and for various injection molding applications. Limited availability and restricted color only.

General Information			
UL YellowCard	E207780-100686827		
Recycled Content	Yes,30%		
Features	Bromine Free		
	Chlorine Free		
	Flame Retardant		
Appearance	Black		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	10	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.60 to 0.80	%	Internal Method
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹	2270	MPa	ASTM D638
Tensile Strength ²			ASTM D638
Yield	64.0	MPa	
Break	58.0	MPa	
Tensile Elongation ³			ASTM D638
Yield	6.0	%	
Break	90	%	
Flexural Modulus ⁴ (50.0 mm Span)	2200	MPa	ASTM D790
Flexural Strength ⁵ (Yield, 50.0 mm Span)	87.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	720	J/m	ASTM D256
Instrumented Dart Impact (23°C, Total Energy)	68.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 3.20 mm	137	°C	
1.8 MPa, Unannealed, 3.20 mm	126	°C	
Vicat Softening Temperature	145	°C	ASTM D1525 ⁶
CLTE			ASTM E831
Flow : -40 to 40°C	6.7E-5	cm/cm/°C	

Transverse : -40 to 40°C	6.7E-5	cm/cm/°C	
RTI Elec	130	°C	UL 746
RTI Imp	120	°C	UL 746
RTI Str	130	°C	UL 746
Electrical	Nominal Value		Test Method
Arc Resistance ⁷	PLC 7		ASTM D495
Comparative Tracking Index (CTI)	PLC 2		UL 746
High Amp Arc Ignition (HAI)	PLC 3		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 4		UL 746
Hot-wire Ignition (HWI)	PLC 2		UL 746
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
0.800 mm, Testing by SABIC	V-2		
1.14 mm, Testing by SABIC	V-0		
3.04 mm, Testing by SABIC	5VA		
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	271 to 293	°C	
Middle Temperature	282 to 304	°C	
Front Temperature	293 to 316	°C	
Nozzle Temperature	288 to 310	°C	
Processing (Melt) Temp	293 to 316	°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.	5.0 mm/min		
2.	Type I, 50 mm/min		
3.	Type I, 50 mm/min		
4.	1.3 mm/min		
5.	1.3 mm/min		
6.	Rate B (120°C/h), Loading 2 (50 N)		
7.	Tungsten Electrode		

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