

Product Comparison

Technical Data

Product Description				
LEXAN™ FR Resin ML1655R - Americas		For existing applications only.		
RTP 300 FR		Unreinforced - Flame Retardant - UL94 V-0		
General	LEXAN™ FR Resin ML1655R - Americas	RTP 300 FR		
Manufacturer / Supplier	• SABIC	• RTP Company		
Generic Symbol	• PC	• PC		
Material Status	• Commercial: Active	• Commercial: Active		
Features	--	• Flame Retardant		
Uses	• Construction Applications • Electrical/Electronic Applications • Electronic Displays	--		
RoHS Compliance	--	• Contact Manufacturer		
Processing Method	--	• Injection Molding		
Physical	LEXAN™ FR Resin ML1655R - Americas	RTP 300 FR	Unit	Test Method
Density / Specific Gravity	1.21	1.22	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	10	10 to 12	g/10 min	ASTM D1238
Molding Shrinkage - Flow				
3.20 mm	--	0.50 to 0.80	%	ASTM D955
3.20 mm	0.50 to 0.70	--	%	Internal Method
Water Absorption				ASTM D570
24 hr, 23°C	0.15	0.15	%	
Saturation, 23°C	0.35	--	%	
Outdoor Suitability	f1	--		UL 746C
Moisture Content	--	0.020	%	
Mechanical	LEXAN™ FR Resin ML1655R - Americas	RTP 300 FR	Unit	Test Method
Tensile Modulus	--	2280	MPa	ASTM D638
Tensile Strength				ASTM D638
Yield ³	62.0	--	MPa	
Break ³	55.0	--	MPa	
--	--	62.7	MPa	
Tensile Elongation				ASTM D638
Yield	--	> 10	%	
Yield ³	7.0	--	%	
Break ³	90	--	%	
Flexural Modulus				ASTM D790
--	--	2410	MPa	
50.0 mm Span ⁴	2240	--	MPa	

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Mechanical	LEXAN™ FR Resin ML1655R - Americas	RTP 300 FR	Unit	Test Method
Flexural Strength	--	96.5	MPa	ASTM D790
Yield, 50.0 mm Span ⁴	91.0	--	MPa	
Impact	LEXAN™ FR Resin ML1655R - Americas	RTP 300 FR	Unit	Test Method
Notched Izod Impact				ASTM D256
3.20 mm	--	640	J/m	
23°C	640	--	J/m	
Unnotched Izod Impact (3.20 mm)	--	No Break		ASTM D4812
Hardness	LEXAN™ FR Resin ML1655R - Americas	RTP 300 FR	Unit	Test Method
Rockwell Hardness (R-Scale)	118	118		ASTM D785
Thermal	LEXAN™ FR Resin ML1655R - Americas	RTP 300 FR	Unit	Test Method
Deflection Temperature Under Load				ASTM D648
0.45 MPa, Unannealed	--	138	°C	
0.45 MPa, Unannealed, 6.40 mm	137	--	°C	
1.8 MPa, Unannealed	--	132	°C	
1.8 MPa, Unannealed, 6.40 mm	132	--	°C	
Vicat Softening Temperature	151	--	°C	ASTM D1525 ⁵
Thermal Conductivity	0.19	--	W/m/K	ASTM C177
RTI Elec	130	--	°C	UL 746
RTI Imp	120	--	°C	UL 746
RTI Str	130	--	°C	UL 746
Electrical	LEXAN™ FR Resin ML1655R - Americas	RTP 300 FR	Unit	Test Method
Volume Resistivity	--	> 1.0E+16	ohms·cm	ASTM D257
Dielectric Constant (1 MHz)	--	3.00		ASTM D150
Dissipation Factor (1 MHz)	--	0.010		ASTM D150
Arc Resistance ⁶	PLC 7	--		ASTM D495
Comparative Tracking Index (CTI)	PLC 2	--		UL 746
High Amp Arc Ignition (HAI) ⁷	PLC 3	--		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 3	--		UL 746
Hot-wire Ignition (HWI)	PLC 2	--		UL 746
Flammability	LEXAN™ FR Resin ML1655R - Americas	RTP 300 FR	Unit	Test Method
Flame Rating				UL 94
1.1 mm	V-0	--		
1.5 mm	--	V-0		
3.0 mm	--	5VA		
Radiant Panel Listing	True	--		UL Unspecified
Injection	LEXAN™ FR Resin ML1655R - Americas	RTP 300 FR	Unit	
Drying Temperature	120	121	°C	
Drying Time	3.0 to 4.0	4.0	hr	
Dew Point	--	-29	°C	
Suggested Max Moisture	0.020	--	%	
Suggested Shot Size	40 to 60	--	%	
Rear Temperature	270 to 295	--	°C	
Middle Temperature	280 to 305	--	°C	
Front Temperature	295 to 315	--	°C	
Nozzle Temperature	290 to 310	--	°C	

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Injection	LEXAN™ FR Resin ML1655R - Americas	RTP 300 FR	Unit
Processing (Melt) Temp	295 to 315	288 to 316	°C
Mold Temperature	70 to 95	82 to 121	°C
Injection Pressure	--	68.9 to 103	MPa
Back Pressure	0.300 to 0.700	--	MPa
Screw Speed	40 to 70	--	rpm
Vent Depth	0.025 to 0.076	--	mm
Injection Notes			
LEXAN™ FR Resin ML1655R - Americas	Injection Molding Parameters Drying Time (Cumulative): 48 hrs		
RTP 300 FR	Desiccant Type Dryer Required.		