

Technical Data

Product Description

LEXAN™ FR Resin 915R - Europe	LEXAN™ 915R resin is a 18 MFR polycarbonate, MVR of 18. Mold release. Non-chlorinated, non-brominated flame retardant, UL94 V0 rated. Available in opaque colors.
Generic PC	This data represents typical values that have been calculated from all products classified as: Generic PC This information is provided for comparative purposes only.

General	LEXAN™ FR Resin 915R - Europe	Generic PC
Manufacturer / Supplier	<ul style="list-style-type: none"> SABIC 	<ul style="list-style-type: none"> Generic
Generic Symbol	<ul style="list-style-type: none"> PC 	<ul style="list-style-type: none"> PC
Material Status	<ul style="list-style-type: none"> Commercial: Active 	<ul style="list-style-type: none"> Commercial: Active
UL Yellow Card ¹	<ul style="list-style-type: none"> E45329-236659 	--
Search for UL Yellow Card	<ul style="list-style-type: none"> SABIC 	--
Availability	<ul style="list-style-type: none"> Europe 	<ul style="list-style-type: none"> Africa & Middle East Asia Pacific Europe Latin America North America
Uses	<ul style="list-style-type: none"> Aerospace Applications Appliances Automotive Exterior Parts Construction Applications Electrical Parts Electrical/Electronic Applications Electronic Displays Lighting Applications Medical/Healthcare Applications Rail Applications Recreational Vehicle Applications 	--
Also Available In	<ul style="list-style-type: none"> Asia Pacific Latin America North America 	<ul style="list-style-type: none"> Africa & Middle East Asia Pacific Europe Latin America North America

Physical	LEXAN™ FR Resin 915R - Europe	Generic PC	Unit	Test Method
Density / Specific Gravity				
--	--	1.14 to 1.27		ASTM D792
--	1.20	1.18 to 1.21	g/cm ³	ISO 1183
--	--	1.20	g/cm ³	ASTM D1505
Apparent (Bulk) Density	--	0.63 to 0.66	g/cm ³	ISO 60
Melt Mass-Flow Rate (MFR)				
300°C/1.2 kg	--	0.80 to 27	g/10 min	ASTM D1238
300°C/1.2 kg	--	1.8 to 24	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR)				
--	--	6.5 to 19	cm ³ /10min	ASTM D1238
300°C/1.2 kg	18	2.0 to 23	cm ³ /10min	ISO 1133
Spiral Flow	--	0.866 to 12.1	in	



Physical	LEXAN™ FR Resin 915R - Europe	Generic PC	Unit	Test Method
Molding Shrinkage				
Flow	--	5.0E-3 to 7.9E-3	in/in	ASTM D955
Across Flow	--	5.6E-3 to 6.1E-3	in/in	ASTM D955
--	--	0.51 to 0.82	%	ISO 294-4
Flow ³	0.50 to 0.70	--	%	Internal Method
Water Absorption				
24 hr	--	0.15 to 0.17	%	ASTM D570
24 hr, 73°F	--	0.15 to 0.25	%	ISO 62
Saturation	--	0.30 to 0.38	%	ASTM D570
Saturation, 73°F	0.35	0.050 to 0.40	%	ISO 62
Equilibrium	--	0.32 to 0.58	%	ASTM D570
Equilibrium, 73°F, 50% RH	0.15	0.066 to 0.18	%	ISO 62
Viscosity Number	--	50.0 to 63.0	cm ³ /g	ISO 307
Mechanical	LEXAN™ FR Resin 915R - Europe	Generic PC	Unit	Test Method
Tensile Modulus				
--	--	233000 to 388000	psi	ASTM D638
--	--	273000 to 393000	psi	ISO 527-1
--	341000	--	psi	ISO 527-1/1
Tensile Strength				
Yield	--	8090 to 9310	psi	ASTM D638
Yield	--	7800 to 9680	psi	ISO 527-2
Yield	9140	--	psi	ISO 527-2/50
Break	--	7920 to 10300	psi	ASTM D638
Break	--	7000 to 10700	psi	ISO 527-2
Break	8700	--	psi	ISO 527-2/50
--	--	6750 to 10300	psi	ASTM D638
--	--	8380 to 9960	psi	ISO 527-2
Tensile Elongation				
Yield	--	0.22 to 18	%	ASTM D638
Yield	--	2.5 to 6.2	%	ISO 527-2
Yield	6.0	--	%	ISO 527-2/50
Break	--	0.0 to 140	%	ASTM D638
Break	--	1.0 to 130	%	ISO 527-2
Break	85	--	%	ISO 527-2/50
Nominal Tensile Strain at Break	--	50 to 53	%	ISO 527-2
Tensile Creep Modulus				
1 hr	--	319000	psi	ISO 899-1
1000 hr	--	275000	psi	
Flexural Modulus				
--	--	285000 to 369000	psi	ASTM D790
--	--	273000 to 377000	psi	ISO 178
-- ⁴	334000	--	psi	ISO 178



Mechanical	LEXAN™ FR Resin 915R - Europe	Generic PC	Unit	Test Method
Flexural Strength				
--	--	9470 to 15900	psi	ASTM D790
--	--	10400 to 14800	psi	ISO 178
-- 4, 5	13100	--	psi	ISO 178
Yield	--	12000 to 15200	psi	ASTM D790
Break	--	10800 to 15700	psi	ASTM D790
Compressive Strength				
--	--	8760 to 16500	psi	ASTM D695
--	--	3050 to 11600	psi	ISO 604
Coefficient of Friction	--	0.090 to 0.32		ASTM D1894
Taber Abrasion Resistance	--	9.50 to 10.1	mg	ASTM D1044
Wear Factor	--	-1.0 to 62	10 ^A -10 in ³ ·min/ ft·lb·hr	ASTM D3702
Films				
	LEXAN™ FR Resin 915R - Europe	Generic PC	Unit	
Film Thickness - Tested	--	6.9 to 26	mil	
Impact				
	LEXAN™ FR Resin 915R - Europe	Generic PC	Unit	Test Method
Charpy Notched Impact Strength				
--	--	3.3 to 39	ft·lb/in ²	ISO 179
-22°F ⁶	5.7	--	ft·lb/in ²	ISO 179/1eA
73°F ⁶	31	--	ft·lb/in ²	ISO 179/1eA
Charpy Unnotched Impact Strength				
--	--	18 to 140	ft·lb/in ²	ISO 179
-22°F ⁶	No Break	--		ISO 179/1eU
73°F ⁶	No Break	--		ISO 179/1eU
Notched Izod Impact				
--	--	0.68 to 17	ft·lb/in	ASTM D256
--	--	3.4 to 34	ft·lb/in ²	ISO 180
-22°F ⁷	5.2	--	ft·lb/in ²	ISO 180/1A
73°F ⁷	31	--	ft·lb/in ²	ISO 180/1A
Notched Izod Impact (Area)	--	4.76 to 40.9	ft·lb/in ²	ASTM D256
Unnotched Izod Impact				
--	--	39 to 60	ft·lb/in	ASTM D4812
--	--	16 to 88	ft·lb/in ²	ISO 180
-22°F ⁷	No Break	--		ISO 180/1U
73°F ⁷	No Break	--		ISO 180/1U
Instrumented Dart Impact				
--	--	466 to 774	in·lb	ASTM D3763
--	--	36.0 to 52.9	ft·lb	ISO 6603-2
Multi-Axial Instrumented Impact Peak Force	--	1090 to 1470	lbf	ISO 6603-2
Gardner Impact	--	300 to 1500	in·lb	ASTM D3029
Gardner Impact	--	320 to 442	in·lb	ASTM D5420
Tensile Impact Strength	--	174 to 305	ft·lb/in ²	ASTM D1822



Hardness	LEXAN™ FR Resin 915R - Europe	Generic PC	Unit	Test Method
Rockwell Hardness				
--	--	69 to 124		ASTM D785
--	--	48 to 121		ISO 2039-2
Shore Hardness				
	--	79 to 82		ISO 868
Ball Indentation Hardness				
--	--	13700 to 16900	psi	ISO 2039-1
H 358/30	13800	--	psi	
Thermal	LEXAN™ FR Resin 915R - Europe	Generic PC	Unit	Test Method
Deflection Temperature Under Load				
66 psi, Unannealed	--	267 to 285	°F	ASTM D648
66 psi, Unannealed	--	264 to 290	°F	ISO 75-2/B
66 psi, Unannealed, 0.157 in, 3.94 in Span ⁸	271	--	°F	ISO 75-2/Be
66 psi, Unannealed, 0.157 in, 2.52 in Span ⁹	273	--	°F	ISO 75-2/Bf
66 psi, Annealed	--	287 to 295	°F	ASTM D648
66 psi, Annealed	--	276 to 295	°F	ISO 75-2/B
264 psi, Unannealed	--	240 to 274	°F	ASTM D648
264 psi, Unannealed	--	239 to 266	°F	ISO 75-2/A
264 psi, Unannealed, 0.157 in, 3.94 in Span ⁸	252	--	°F	ISO 75-2/Ae
264 psi, Unannealed, 0.157 in, 2.52 in Span ⁹	252	--	°F	ISO 75-2/Af
264 psi, Annealed	--	276 to 289	°F	ASTM D648
264 psi, Annealed	--	281 to 289	°F	ISO 75-2/A
Continuous Use Temperature				
	--	248 to 275	°F	ASTM D794
Glass Transition Temperature				
--	--	289 to 295	°F	ISO 11357-2
--	--	292 to 298	°F	DSC
Vicat Softening Temperature				
--	--	270 to 315	°F	ASTM D1525
--	286	--	°F	ISO 306/B120
--	284	--	°F	ISO 306/B50
--	--	277 to 303	°F	ISO 306
Ball Indentation Temperature				
	--	256 to 257	°F	IEC 60598-1
Ball Pressure Test				
253 to 261°F	Pass	--		IEC 60695-10-2
275°F ¹⁰	Pass	--		
Melting Temperature				
	--	284 to 450	°F	
CLTE				
Flow	--	3.2E-5 to 3.9E-5	in/in/°F	ASTM D696
Flow	--	8.7E-6 to 0.095	in/in/°F	ASTM E831
Flow	--	3.6E-5 to 4.0E-5	in/in/°F	ISO 11359-2
Flow : 73 to 176°F	3.9E-5	--	in/in/°F	ISO 11359-2
Transverse	--	4.4E-6 to 1.0E-4	in/in/°F	ASTM D696
Transverse	--	3.3E-5 to 4.5E-5	in/in/°F	ASTM E831 ISO 11359-2
Transverse : 73 to 176°F	3.9E-5	--	in/in/°F	ISO 11359-2



Thermal	LEXAN™ FR Resin 915R - Europe	Generic PC	Unit	Test Method
Specific Heat	--	0.298 to 0.302	Btu/lb/°F	ASTM C351
Thermal Conductivity				
--	--	0.90 to 3.3	Btu·in/hr/ft²/°F	ASTM C177
--	1.4	1.2 to 5.0	Btu·in/hr/ft²/°F	ISO 8302
RTI Elec	266	172 to 270	°F	UL 746B
RTI Imp	248	175 to 266	°F	UL 746B
RTI Str	257	172 to 270	°F	UL 746B
Electrical	LEXAN™ FR Resin 915R - Europe	Generic PC	Unit	Test Method
Surface Resistivity				
--	--	2.5 to 2.6E+17	ohms	ASTM D257
--	> 1.0E+15	1.0 to 1.0E+16	ohms	IEC 60093
Volume Resistivity				
--	--	10 to 2.5E+17	ohms·cm	ASTM D257
--	> 1.0E+15	1.0E+2 to 2.5E+17	ohms·cm	IEC 60093
--	--	1.0E+11 to 5.5E+14	ohms·m	IEC 62631-3-1
Dielectric Strength				
--	--	370 to 780	V/mil	ASTM D149
--	--	430 to 870	V/mil	IEC 60243-1
0.126 in, in Oil	430	--	V/mil	IEC 60243-1
Dielectric Constant				
--	--	2.80 to 3.20		ASTM D150
--	--	3.00 to 3.10		IEC 60250
--	--	2.90		IEC 60250
50 Hz	2.70	--		IEC 60250
60 Hz	2.70	--		IEC 60250
1 MHz	2.70	--		IEC 60250
Dissipation Factor				
--	--	4.0E-4 to 0.078		ASTM D150
--	--	4.0E-4 to 0.012		IEC 60250
50 Hz	1.0E-3	--		IEC 60250
60 Hz	1.0E-3	--		IEC 60250
1 MHz	0.010	--		IEC 60250
--	--	1.0E-3 to 0.010		IEC 62631-2-1
Arc Resistance	--	88.7 to 120	sec	ASTM D495
Comparative Tracking Index	225	113 to 250	V	IEC 60112
High Amp Arc Ignition (HAI)	--	90.0 to 120		UL 746A
Hot-wire Ignition (HWI)	--	23 to 45	sec	UL 746A



Flammability	LEXAN™ FR Resin 915R - Europe	Generic PC	Unit	Test Method
Burning Rate	--	3.9 to 4.0	in/min	ISO 3795
Flame Rating (0.04 in)	V-0	--		UL 94
Glow Wire Flammability Index				IEC 60695-2-12
--	--	1560 to 1760	°F	
0.04 in	1560	--	°F	
0.06 in	1760	--	°F	
Glow Wire Ignition Temperature				IEC 60695-2-13
--	--	1450 to 1620	°F	
0.031 in	1470	--	°F	
Oxygen Index				
--	--	25 to 37	%	ASTM D2863
--	35	25 to 36	%	ISO 4589-2
Optical	LEXAN™ FR Resin 915R - Europe	Generic PC	Unit	Test Method
Gloss	--	3 to 100		ISO 2813
Refractive Index				
--	--	1.584 to 1.587		ASTM D542
--	--	1.566 to 41.18		ISO 489
Light Transmittance	--	86.7 to 89.1	%	ASTM D1003
Haze	--	-0.500 to 2.01	%	ASTM D1003
Fill Analysis	LEXAN™ FR Resin 915R - Europe	Generic PC	Unit	Test Method
Melt Density	--	1.01	g/cm ³	
Melt Thermal Conductivity	--	1.7	Btu·in/hr/ft ² /°F	ASTM C177
Injection	LEXAN™ FR Resin 915R - Europe	Generic PC	Unit	
Drying Temperature	248	246 to 252	°F	
Drying Time	2.0 to 4.0	2.4 to 5.2	hr	
Drying Time, Maximum	--	28	hr	
Dew Point	--	-20	°F	
Suggested Max Moisture	0.020	0.020 to 0.025	%	
Suggested Shot Size	--	50	%	
Suggested Max Regrind	--	20	%	
Hopper Temperature	140 to 176	157 to 158	°F	
Rear Temperature	500 to 536	488 to 580	°F	
Middle Temperature	518 to 554	514 to 592	°F	
Front Temperature	536 to 572	531 to 613	°F	
Nozzle Temperature	518 to 554	531 to 601	°F	
Processing (Melt) Temp	536 to 572	531 to 611	°F	
Melt Temperature (Optimum)	--	545	°F	
Mold Temperature	176 to 212	167 to 212	°F	
Injection Pressure	--	12300 to 14900	psi	
Holding Pressure	--	12800 to 13100	psi	
Back Pressure	--	59.9 to 114	psi	
Screw Speed	--	52 to 57	rpm	



Injection	LEXAN™ FR Resin 915R - Europe	Generic PC	Unit
Clamp Tonnage	--	3.5	tons/in ²
Vent Depth	--	1.8E-3 to 2.2E-3	in

Injection Notes

Generic PC This data represents typical values that have been calculated from all products classified as: Generic PC
This information is provided for comparative purposes only.

Extrusion	LEXAN™ FR Resin 915R - Europe	Generic PC	Unit
Drying Temperature	--	229 to 255	°F
Drying Time	--	3.3 to 13	hr
Cylinder Zone 1 Temp.	--	512 to 518	°F
Cylinder Zone 2 Temp.	--	542 to 549	°F
Cylinder Zone 3 Temp.	--	538 to 545	°F
Cylinder Zone 4 Temp.	--	540 to 545	°F
Adapter Temperature	--	553 to 562	°F
Melt Temperature	--	525 to 594	°F
Die Temperature	--	528 to 568	°F

Extrusion Notes

Generic PC This data represents typical values that have been calculated from all products classified as: Generic PC
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Notes

¹ A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

² Typical properties: these are not to be construed as specifications.

³ Tensile Bar

⁴ 0.079 in/min

⁵ at Yield

⁶ 80*10*3 sp=62mm

⁷ 80*10*3 mm

⁸ 120*10*4 mm

⁹ 80*10*4 mm

¹⁰ Approximate Maximum

