

LEXANT™ FR RESINS LUX9612G

REGION EUROPE

DESCRIPTION

LEXANT™ LUX9612G resin is a 7 MFR polycarbonate, MVR of 7. UV stabilized. Non-brominated and non-chlorinated flame retardant, UL94 V0 rated. UL746C f2 rated. Light diffusion effect. Good color stability under heat exposure. Injection moldable.

TYPICAL PROPERTY VALUES

Revision 20230726

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	62	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	65	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	80	%	ASTM D638
Tensile Modulus, 5 mm/min	2300	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	95	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2160	MPa	ASTM D790
Hardness, Rockwell R	118	-	ASTM D785
Tensile Stress, yield, 50 mm/min	62	MPa	ISO 527
Tensile Stress, break, 50 mm/min	58	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Tensile Strain, break, 50 mm/min	77	%	ISO 527
Tensile Modulus, 1 mm/min	2230	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	94	MPa	ISO 178
Flexural Stress, brk, 12.5 mm/min	95	MPa	ISO 178
Flexural Modulus, 2 mm/min	2250	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D4812
Izod Impact, notched, 23°C	400	J/m	ASTM D256
Multiaxial Impact	130	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	70	J	ASTM D3763
Izod Impact, unnotched 80°10°3 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80°10°3 -30°C	NB	kJ/m²	ISO 180/1U
Izod Impact, notched 80°10°3 +23°C	40	kJ/m²	ISO 180/1A
Izod Impact, notched 80°10°3 -30°C	11	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80°10°3 sp=62mm	43	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80°10°3 sp=62mm	12	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80°10°3 sp=62mm	NB	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm	NB	kJ/m²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate B/50	140	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	123	°C	ASTM D648
CTE, -40°C to 40°C, flow	6.8E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.7E-05	1/°C	ASTM E831

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Specific Heat	1.26	J/g·°C	ASTM C351
Thermal Conductivity	0.2	W/m·°C	ASTM C177
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	141	°C	ISO 306
Vicat Softening Temp, Rate B/120	142	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	123	°C	ISO 75/Af
Relative Temp Index, Elec	125	°C	UL 746B
Relative Temp Index, Mech w/impact	115	°C	UL 746B
Relative Temp Index, Mech w/o impact	125	°C	UL 746B
PHYSICAL			
Specific Gravity	1.2	-	ASTM D792
Water Absorption, equilibrium, 100°C	0.58	%	ASTM D570
Mold Shrinkage, flow, 3.2 mm	0.6 – 0.8	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	7	g/10 min	ASTM D1238
Density	1.2	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.35	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.15	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	7	cm³/10 min	ISO 1133
OPTICAL			
Refractive Index	1.586	-	ISO 489
ELECTRICAL			
Dielectric Strength, in air, 3.2 mm	15	kV/mm	ASTM D149
Relative Permittivity, 50/60 Hz	3.17	-	ASTM D150
Relative Permittivity, 1 MHz	2.96	-	ASTM D150
Dissipation Factor, 50/60 Hz	0.0009	-	ASTM D150
Dissipation Factor, 1 MHz	0.01	-	ASTM D150
Hot Wire Ignition {PLC}	3	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	1	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
Volume Resistivity	>1.E+15	Ω.cm	IEC 60093
FLAME CHARACTERISTICS			
UL Recognized, 94V-2 Flame Class Rating	0.3	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	1.5	mm	UL 94
Glow Wire Flammability Index 750°C, passes at	0.8	mm	IEC 60695-2-12
Glow Wire Flammability Index 850°C, passes at	1.5	mm	IEC 60695-2-12
Glow Wire Flammability Index 960°C, passes at	1	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.0 mm	850	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.5 mm	850	°C	IEC 60695-2-13
UV-light, water exposure/immersion	F2	-	UL 746C
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	2 – 4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	280 – 300	°C	
Nozzle Temperature	270 – 290	°C	

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Front - Zone 3 Temperature	280 – 300	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	80 – 100	°C	

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