

LEXANT™ FR RESINS 509RU

REGION EUROPE

DESCRIPTION

LEXANT™ 509RU resin is a 10% glass filled polycarbonate. UV stabilized. Mold release. Non-chlorinated, non-brominated flame retardant, UL94 V0 rated. No PFAS intentionally added. It is an excellent candidate for Electrical and Electronic applications. Available in various opaque colors.

TYPICAL PROPERTY VALUES

Revision 20260423

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yield, 5 mm/min	60	MPa	ISO 527
Tensile Stress, break, 5 mm/min	45	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	5	%	ISO 527
Tensile Strain, break, 5 mm/min	10	%	ISO 527
Tensile Modulus, 1 mm/min	3600	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	100	MPa	ISO 178
Flexural Modulus, 2 mm/min	3500	MPa	ISO 178
Tensile Stress, yld, Type I, 5 mm/min	63	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	48	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	3	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	12	%	ASTM D638
Tensile Modulus, 5 mm/min	3930	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	108	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	3520	MPa	ASTM D790
Hardness, Rockwell M	85	-	ASTM D785
Hardness, Rockwell R	124	-	ASTM D785
IMPACT			
Izod Impact, unnotched 80°10°3 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80°10°3 -30°C	130	kJ/m²	ISO 180/1U
Izod Impact, notched 80°10°3 +23°C	10	kJ/m²	ISO 180/1A
Izod Impact, notched 80°10°3 -30°C	8	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80°10°3 sp=62mm	10	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80°10°3 sp=62mm	9	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	130	kJ/m²	ISO 179/1eU
Izod Impact, notched, 23°C	106	J/m	ASTM D256
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D4812
THERMAL			
Specific Heat	1.21	J/g·°C	ASTM C351
Thermal Conductivity	0.2	W/m·°C	ASTM C177
Vicat Softening Temp, Rate B/50	141	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	143	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	136	°C	ASTM D648
CTE, -40°C to 40°C, flow	4.70E-05	1/°C	ASTM E831

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CHEMISTRY THAT MATTERS™



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, xflow	6.40E-05	1/°C	ASTM E831
CTE, 23°C to 80°C, flow	4.45E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	9.27E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	141	°C	ISO 306
Vicat Softening Temp, Rate B/120	143	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	142	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	136	°C	ISO 75/Af
Relative Temp Index, Elec	80	°C	UL 746B
Relative Temp Index, Mech w/impact	80	°C	UL 746B
Relative Temp Index, Mech w/o impact	80	°C	UL 746B
PHYSICAL			
Density	1.26	g/cm³	ISO 1183
Mold Shrinkage on Tensile Bar, flow	0.4	%	SABIC method
Mold Shrinkage, flow, 3.2 mm	0.3	%	SABIC method
Melt Volume Rate, MVR at 300°C/1.2 kg	8	cm³/10 min	ISO 1133
Water Absorption, (23°C/saturated)	0.31	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.13	%	ISO 62
ELECTRICAL			
Comparative Tracking Index	150	V	IEC 60112
High Amp Arc Ignition, 0.8 mm	0	PLC Code	UL 746A
High Amp Arc Ignition, 1.5 mm	0	PLC Code	UL 746A
High Amp Arc Ignition, 3.0 mm	0	PLC Code	UL 746A
Hot-wire Ignition, 0.8 mm	4	PLC Code	UL 746A
Hot-wire Ignition, 1.5 mm	3	PLC Code	UL 746A
Hot-wire Ignition, 3.0 mm	2	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Yellow Card Link	E45329-10223277	-	-
UL Recognized, 94-5VA Flame Class Rating	3.0	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	1.5	mm	UL 94
UL Recognized, 94V-2 Flame Class Rating	0.8	mm	UL 94
Glow Wire Flammability Index 960°C, passes at	0.8	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 0.8 mm	850	°C	IEC 60695-2-13
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	270 – 320	°C	
Nozzle Temperature	260 – 310	°C	
Front - Zone 3 Temperature	270 – 320	°C	
Middle - Zone 2 Temperature	260 – 310	°C	
Rear - Zone 1 Temperature	250 – 300	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	80 – 120	°C	



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