



# LEXAN™ FR RESINS 525RU

REGION EUROPE

## DESCRIPTION

LEXAN 525RU Polycarbonate (PC) is an injection moldable non-chlorinated and non-brominated flame retardant grade that is 10% glass fiber filled. It is UV stabilized and has a UL94 V0@1.5mm rating and is available in various opaque color options. This is an alternative to LEXAN 503R, 505RU.

## TYPICAL PROPERTY VALUES

Revision 20250625

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
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	3800	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	100	MPa	ISO 178
Flexural Modulus, 2 mm/min	3600	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
<b>IMPACT</b>			
Izod Impact, unnotched 80°10°3 +23°C	NB	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, unnotched 80°10°3 -30°C	130	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80°10°3 +23°C	10	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80°10°3 -30°C	8	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80°10°3 sp=62mm	10	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80°10°3 sp=62mm	9	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80°10°3 sp=62mm	NB	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm	130	kJ/m <sup>2</sup>	ISO 179/1eU
Izod Impact, notched, 23°C	106	J/m	ASTM D256
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D4812
<b>THERMAL</b>			
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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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	130	°C	UL 746B
Relative Temp Index, Mech w/impact	130	°C	UL 746B
Relative Temp Index, Mech w/o impact	130	°C	UL 746B
<b>PHYSICAL</b>			
Density	1.26	g/cm <sup>3</sup>	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	9	cm <sup>3</sup> / 10 min	ISO 1133
Water Absorption, (23°C/saturated)	0.31	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.13	%	ISO 62
<b>ELECTRICAL</b>			
Volume Resistivity	1.0E+15	Ω.cm	IEC 60093
Comparative Tracking Index	175	V	IEC 60112
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
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	1	PLC Code	UL 746A
Hot-wire Ignition, 1.5 mm	1	PLC Code	UL 746A
Hot-wire Ignition, 3.0 mm	0	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	3	PLC Code	UL 746A
Arc Resistance, Tungsten {PLC}	7	PLC Code	ASTM D495
<b>FLAME CHARACTERISTICS</b>			
UL Recognized, 94-5VA Flame Class Rating	3.0	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	1.5	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	825	°C	IEC 60695-2-13
UV-light, water exposure/immersion	F1	-	UL 746C
Oxygen Index (LOI)	37	%	ISO 4589
<b>INJECTION MOLDING</b>			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	290 – 320	°C	
Nozzle Temperature	280 – 310	°C	
Front - Zone 3 Temperature	290 – 320	°C	
Middle - Zone 2 Temperature	280 – 310	°C	
Rear - Zone 1 Temperature	270 – 300	°C	



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Hopper Temperature	60 – 80	°C	
Mold Temperature	80 – 120	°C	

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