



LEXAN™ Resin 505RU
Americas: COMMERCIAL

LEXAN 505RU is a glass reinforced, flame retardant (FR) grade with non brominated and non chlorinated FR systems and UV stabilization packages. This product is intended for applications to meet WEEE/RoHS regulations as well as various voluntary environmental labels.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	750	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	630	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	4	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	6	%	ASTM D 638
Tensile Modulus, 5 mm/min	36700	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	1160	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	32600	kgf/cm ²	ASTM D 790
Tensile Stress, yield, 5 mm/min	72	MPa	ISO 527
Tensile Stress, break, 5 mm/min	60	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3	%	ISO 527
Tensile Strain, break, 5 mm/min	6	%	ISO 527
Tensile Modulus, 1 mm/min	3500	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	122	MPa	ISO 178
Flexural Modulus, 2 mm/min	3500	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	122	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	9	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	7	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	254	cm-kgf	ASTM D 3763
Izod Impact, unnotched 80*10*3 +23°C	NB75	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	73	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	10	kJ/m ²	ISO 180/1A



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IMPACT			
Izod Impact, notched 80*10*3 -30°C	8	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	10	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	7	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	NB87	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	NB85	kJ/m ²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate B/50	149	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	137	°C	ASTM D 648
CTE, -40°C to 40°C, flow	5.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.4E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	5.E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	8.5E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	Pass	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	147	°C	ISO 306
Vicat Softening Temp, Rate B/120	149	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	136	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.26	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.4 - 0.6	%	SABIC Method
Melt Flow Rate, 300°C/1.2 kgf	8	g/10 min	ASTM D 1238
Density	1.26	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.3	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.15	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	7	cm ³ /10 min	ISO 1133
ELECTRICAL			
Hot Wire Ignition {PLC}	3	PLC Code	UL 746A



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ELECTRICAL			
High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
Comparative Tracking Index	175	V	IEC 60112
FLAME CHARACTERISTICS			
UL Compliant, 94V-2 Flame Class Rating (3)(4)	0.75	mm	UL 94 by SABIC-IP
UL Compliant, 94V-0 Flame Class Rating (3)(4)	1.5	mm	UL 94 by SABIC-IP
UL Compliant, 94-5VA Rating (3)(4)	3	mm	UL 94 by SABIC-IP
UL Compliant, 94-5VB Rating (3)(4)	3	mm	UL 94 by SABIC-IP
Glow Wire Flammability Index 960°C, passes at	0.75	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.0 mm	850	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 3.0 mm	875	°C	IEC 60695-2-13
UV-light, water exposure/immersion	F1	-	UL 746C



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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	120	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	48	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	310 - 330	°C
Nozzle Temperature	305 - 325	°C
Front - Zone 3 Temperature	310 - 330	°C
Middle - Zone 2 Temperature	300 - 320	°C
Rear - Zone 1 Temperature	290 - 310	°C
Mold Temperature	80 - 115	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	40 - 70	rpm
Shot to Cylinder Size	40 - 60	%
Vent Depth	0.025 - 0.076	mm