

LEXANTM FR RESINS LUX7169

REGION EUROPE

DESCRIPTION

LEXAN LUX7169 is an injection moldable polycarbonate (PC). It contains non-brominated, non-chlorinated flame retardant systems with UL-94 V0@0.9mm rating. It is designed for high light reflectance and shielding applications with good weathering capability.

TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yield, 50 mm/min	55	MPa	ISO 527
Tensile Stress, break, 50 mm/min	50	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5	%	ISO 527
Tensile Strain, break, 50 mm/min	75	%	ISO 527
Tensile Modulus, 1 mm/min	2750	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2700	MPa	ISO 178
Tensile Stress, yld, Type I, 50 mm/min	55	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	50	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	75	%	ASTM D 638
Tensile Modulus, 50 mm/min	2750	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	90	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2700	MPa	ASTM D 790
Hardness, Rockwell M	46	-	ISO 2039-2
Hardness, Rockwell R	120	-	ISO 2039-2
IMPACT			
Izod Impact, notched 80*10*3 +23°C	35	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	25	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, notched, 23°C	400	J/m	ASTM D 256
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D 4812
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	40	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m ²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate B/50	142	°C	ISO 306
Vicat Softening Temp, Rate B/120	143	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	135	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	120	°C	ISO 75/Af
Ball Pressure Test, 125°C +/- 2°C	PASS	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	142	°C	ASTM D 1525
Vicat Softening Temp, Rate B/120	143	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	135	°C	ASTM D 648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 1.82 MPa, 3.2mm, unannealed	120	°C	ASTM D 648
CTE, -40°C to 40°C, flow	6.8E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.8E-05	1/°C	ASTM E 831
CTE, 23°C to 80°C, flow	7.2E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	7.3E-05	1/°C	ISO 11359-2
PHYSICAL			
Density	1.38	g/cm ³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.06	%	ISO 62
Moisture Absorption, 50% RH, 24 hrs	0.03	%	ASTM D 570
Melt Volume Rate, MVR at 300°C/1.2 kg	19	cm ³ /10 min	ISO 1133
Specific Gravity	1.38	-	ASTM D 792
Water Absorption, 24 hours	0.14	%	ASTM D 570
Water Absorption, (23°C/sat)	0.22	%	ISO 62
Mold Shrinkage, flow	0.3 – 0.5	%	SABIC method
Mold Shrinkage, xflow	0.3 – 0.5	%	SABIC method
ELECTRICAL			
Comparative Tracking Index	275	V	IEC 60112
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Recognized, 94V-2 Flame Class Rating	0.4	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	0.9	mm	UL 94
UL Recognized, 94-5VA Flame Class Rating	3	mm	UL 94
Glow Wire Flammability Index 960°C, passes at	1.0	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.0 mm	875	°C	IEC 60695-2-13
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	3 – 4	hrs	
Drying Time (Cumulative)	48	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	270 – 295	°C	
Nozzle Temperature	265 – 290	°C	
Front - Zone 3 Temperature	270 – 295	°C	
Middle - Zone 2 Temperature	260 – 280	°C	
Rear - Zone 1 Temperature	250 – 270	°C	
Mold Temperature	70 – 95	°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	