LEXAN™ FR RESINS LUX7189

REGION EUROPE

DESCRIPTION

LEXAN LUX7189 is an injection moldable polycarbonate (PC) with an MVR (300°C/1.2kg) 23. It contains non-brominated, non-chlorinated flame retardant systems with UL-94 V0@1.5mm rating. It is designed for high light reflectance and shielding applications with good UV weathering capability.

TYPICAL PROPERTY VALUES

Revision 20240710

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	60	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	52	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	110	%	ASTM D638
Tensile Modulus, 50 mm/min	2700	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	98	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2700	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	60	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	50	%	ISO 527
Tensile Modulus, 1 mm/min	2600	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2300	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	2140	J/m	ASTM D4812
Izod Impact, notched, 23°C	150	J/m	ASTM D256
Izod Impact, notched, -30°C	100	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	59	J	ASTM D3763
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	35	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	11	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	160	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	160	kJ/m²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate B/50	140	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	135	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	125	°C	ASTM D648
CTE, -40°C to 40°C, flow	6.E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.5E-05	1/°C	ASTM E831
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	138	°C	ISO 306
Vicat Softening Temp, Rate B/120	139	°C	ISO 306
HDT/Ae, 1.8 MPa Annealed 120°C, 2hrs	133	°C	ISO 75/Ae
PHYSICAL			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Specific Gravity	1.3	-	ASTM D792
Density	1.3	g/cm³	ASTM D792
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	22	g/10 min	ASTM D1238
Melt Volume Rate, MVR at 300°C/1.2 kg	23	cm³/10 min	ISO 1133
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating	1.5	mm	UL 94
UL Recognized, 94-5VA Flame Class Rating	3	mm	UL 94
UL Recognized, 94-5VB Flame Class Rating	2.5	mm	UL 94
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
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	

DISCLAIMER