

LEXAN™ COPOLYMER ML7689

REGION EUROPE

DESCRIPTION

LEXAN ML7689 polycarbonate (PC) siloxane copolymer resin IS a high viscosity injection molding (IM) grade WITH good processability, offering opportunities FOR shorter IM CYCLE times compared TO standard PC resins. This resin offers extreme low temperature (-40 degree C) ductility.

This material is food contact compliant in most jurisdictions – exceptions may exist, request a declaration for details.

GENERAL INFORMATION	
Features	Food contact, Impact resistant, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Heavy Truck, Automotive Interiors
Building and Construction	Water Management
Consumer	Home Decoration, Home Appliances
Electrical and Electronics	Mobile Phone - Computer - Tablets, Lighting
Industrial	Electrical, Defense

TYPICAL PROPERTY VALUES

Revision 20250404

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yld, Type I, 50 mm/min	56	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	50	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	100	%	ASTM D638
Tensile Modulus, 50 mm/min	2050	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	92	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2250	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	57	MPa	ISO 527
Tensile Stress, break, 50 mm/min	60	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Tensile Strain, break, 50 mm/min	120	%	ISO 527
Tensile Modulus, 1 mm/min	2150	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	85	MPa	ISO 178
Flexural Modulus, 2 mm/min	2250	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, notched, 23°C	850	J/m	ASTM D256
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 3.2 mm, unannealed	139	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 1.82 MPa, 3.2mm, unannealed	124	°C	ASTM D648
CTE, 23°C to 80°C, flow	7.2E-05	1 / °C	ISO 11359-2
CTE, 23°C to 80°C, xflow	7.2E-05	1 / °C	ISO 11359-2
Vicat Softening Temp, Rate B / 120	146	°C	ISO 306
HDT / Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	128	°C	ISO 75 / Ae
PHYSICAL ⁽¹⁾			
Specific Gravity	1.18	-	ASTM D792
Melt Flow Rate, 300°C / 1.2 kgf	6	g / 10 min	ASTM D1238
Density	1.19	g / cm ³	ISO 1183
Melt Volume Rate, MVR at 300°C / 1.2 kg	6	cm ³ / 10 min	ISO 1133
INJECTION MOLDING ⁽²⁾			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	48	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	295 – 315	°C	
Nozzle Temperature	290 – 310	°C	
Front - Zone 3 Temperature	295 – 315	°C	
Middle - Zone 2 Temperature	280 – 305	°C	
Rear - Zone 1 Temperature	270 – 295	°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	

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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