

LEXANT™ COPOLYMER EXL4019

REGION EUROPE

DESCRIPTION

LEXAN EXL4019 is an opaque 9% Glass Fiber (GF) reinforced polycarbonate (PC) siloxane copolymer resin for injection molding (IM) applications requiring improved stiffness. This resin also offers improved ductility over conventional GF reinforced PC resins in combination with medium flow characteristics and excellent processability with opportunities for shorter IM cycle times when compared to standard PC. LEXAN EXL4019 resin is a product that may be an excellent candidate for a wide variety of applications. Available in limited colors only.

TYPICAL PROPERTY VALUES

Revision 20230607

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yld, Type I, 5 mm/min	55	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	45	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	4.3	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	14	%	ASTM D638
Tensile Modulus, 5 mm/min	3950	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	103	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	3500	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	54	MPa	ISO 527
Tensile Stress, break, 5 mm/min	48	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	4.3	%	ISO 527
Tensile Strain, break, 5 mm/min	8.7	%	ISO 527
Tensile Modulus, 1 mm/min	3900	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	98	MPa	ISO 178
Flexural Modulus, 2 mm/min	3450	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, notched, 23°C	345	J/m	ASTM D256
Izod Impact, notched, -30°C	150	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	40	J	ASTM D3763
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 80*10*3 +23°C	25	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	10	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	25	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	15	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m ²	ISO 179/1eU
THERMAL ⁽¹⁾			
Vicat Softening Temp, Rate B/50	146	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	137	°C	ASTM D648
CTE, -40°C to 40°C, flow	4.7E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7.E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	4.7E-05	1/°C	ISO 11359-2

© 2023 Copyright by SABIC. All rights reserved

CHEMISTRY THAT MATTERS™

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, xflow	7.E-05	1 / °C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	Passes	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	146	°C	ISO 306
Vicat Softening Temp, Rate B/120	146	°C	ISO 306
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	135	°C	ISO 75/Ae
PHYSICAL ⁽¹⁾			
Specific Gravity	1.25	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm ⁽²⁾	0.2 – 0.6	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm ⁽²⁾	0.2 – 0.6	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	7.5	g/10 min	ASTM D1238
Density	1.25	g/cm ³	ISO 1183
Water Absorption, (23°C/saturated)	0.15	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.4	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	6	cm ³ /10 min	ISO 1133
INJECTION MOLDING ⁽³⁾			
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	

- (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) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article. 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.
- (3) 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.

ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

MORE INFORMATION

For curve data and CAE cards, please visit and register at <https://materialfinder.sabic-specialties.com>



DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.