

LEXAN™ COPOLYMER HPX8REU

REGION EUROPE

DESCRIPTION

Very high flow specialty polycarbonate with outstanding processability and ductility. For medical devices and pharmaceutical applications. Healthcare management of change, biocompatible (ISO10993 or USP Class VI). ETO sterilizable. Contains mold release.

TYPICAL PROPERTY VALUES

PROPERTIES **TYPICAL VALUES** UNITS **TEST METHODS** MECHANICAL⁽¹⁾ Tensile Stress, yld, Type I, 50 mm/min 59 MPa ASTM D638 Tensile Stress, brk, Type I, 50 mm/min 58 MPa ASTM D638 Tensile Strain, yld, Type I, 50 mm/min 57 % ASTM D638 118.9 Tensile Strain, brk, Type I, 50 mm/min % ASTM D638 Tensile Modulus, 50 mm/min 2360 MPa ASTM D638 Flexural Stress, yld, 1.3 mm/min, 50 mm span ASTM D790 99 MPa Flexural Modulus, 1.3 mm/min, 50 mm span 2350 MPa ASTM D790 Hardness, Rockwell L 90 ASTM D785 Tensile Stress, yield, 50 mm/min 59 MPa ISO 527 Tensile Stress, break, 50 mm/min 56 150 527 MPa Tensile Strain, yield, 50 mm/min 5.4 % ISO 527 Tensile Strain, break, 50 mm/min 118.6 % ISO 527 Tensile Modulus, 1 mm/min 2400 MPa ISO 527 Flexural Stress, yield, 2 mm/min 92 MPa ISO 178 Flexural Modulus, 2 mm/min 2250 MPa ISO 178 IMPACT (1) Izod Impact, notched, 23°C 702 J/m ASTM D256 220 Izod Impact, notched, -30°C ASTM D256 J/m ASTM D3763 Instrumented Dart Impact Total Energy, 23°C 79 Izod Impact, unnotched 80*10*3 +23°C NB kJ/m² ISO 180/1U Izod Impact, unnotched 80*10*3 -30°C NB ISO 180/1U kJ/m² Izod Impact, notched 80*10*3 +23°C ISO 180/1A 60 kJ/m² Izod Impact, notched 80*10*3 -30°C 30 kJ/m² ISO 180/1A Izod Impact, notched 80*10*4 +23°C 45 kJ/m² ISO 180/1A Izod Impact, notched 80*10*4 -30°C ISO 180/1A 11 kJ/m² Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm ISO 179/1eA 60 kJ/m² Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm 30 kJ/m² ISO 179/1eA Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm NB ISO 179/1eU kJ/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm NB kJ/m² Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm ISO 179/1eA 54 kJ/m² Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm 12 kJ/m² ISO 179/1eA THERMAL⁽¹⁾ Vicat Softening Temp, Rate A/50 138 °C ASTM D1525 °C HDT, 1.82 MPa, 3.2mm, unannealed 120 ASTM D648

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CHEMISTRY THAT MATTERS

Revision 20230918



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 95°C, flow	6.5E-05	1/°C	ASTM E831
CTE, -40°C to 95°C, xflow	7.4E-05	1/°C	ASTM E831
CTE, 23°C to 80°C, flow	6.5E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	7.4E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASS	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	137	°C	ISO 306
Vicat Softening Temp, Rate B/120	140	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	117	°C	ISO 75/Af
PHYSICAL ⁽¹⁾			
Specific Gravity	1.19		ASTM D792
Mold Shrinkage, flow, 3.2 mm ⁽²⁾	0.4 - 0.8	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm ⁽²⁾	0.4 - 0.8	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	35	g/10 min	ASTM D1238
Density	1.19	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.24	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.09	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	33	cm³/10 min	ISO 1133
OPTICAL ⁽¹⁾			
Light Transmission, 2.54 mm	82	%	ASTM D1003
Haze, 2.54 mm	3	%	ASTM D1003
ELECTRICAL ⁽¹⁾			
Volume Resistivity	>1.E+15	Ω.cm	ASTM D257
Surface Resistivity	>1.E+15	Ω	ASTM D257
INJECTION MOLDING (3)			
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) 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.



MORE INFORMATION

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

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