LEXAN™ COPOLYMER HFD1232

REGION AMERICAS

DESCRIPTION

18 MFR LEXAN High Flow Ductile Copolymer UV-stabilized, available in transparent colors only

TYPICAL PROPERTY VALUES

Revision 20170913

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	58	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	63	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	135	%	ASTM D 638
Tensile Modulus, 5 mm/min	2240	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	98	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2220	MPa	ASTM D 790
Hardness, Rockwell R	120	-	ASTM D 785
Tensile Stress, yield, 50 mm/min	62	MPa	ISO 527
Tensile Stress, break, 50 mm/min	66	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Tensile Strain, break, 50 mm/min	124	%	ISO 527
Tensile Modulus, 1 mm/min	2150	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2120	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	887	J/m	ASTM D 256
Izod Impact, notched, -10°C	838	J/m	ASTM D 256
Izod Impact, notched, -30°C	145	J/m	ASTM D 256
Multiaxial Impact	116	J	ISO 6603
Instrumented Impact Total Energy, 23°C	76	J	ASTM D 3763
Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	NB	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	67	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	22	kJ/m²	ISO 180/1A

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Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	79	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	14	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate B/50	136	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	123	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	113	°C	ASTM D 648
CTE, -40°C to 40°C, flow	8.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	8.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	8.E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	8.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASS	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	129	°C	ISO 306
Vicat Softening Temp, Rate B/120	130	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	115	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.2	-	ASTM D 792
Density	1.2	g/cm³	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	18	g/10 min	ASTM D 1238
Density	1.2	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.3	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.15	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	17	cm³/10 min	ISO 1133
OPTICAL			
Light Transmission, 2.54 mm	88	%	ASTM D 1003
Haze, 2.54 mm	<1	%	ASTM D 1003
Refractive Index	1.582	-	ASTM D542
INJECTION MOLDING			
Drying Temperature	105 – 110	°C	
Drying Time	3 – 4	hrs	
Drying Time (Cumulative)	24	hrs	
Melt Temperature	260 – 305	°C	
Nozzle Temperature	255 – 300	°C	
Front - Zone 3 Temperature	260 – 305	°C	
Middle - Zone 2 Temperature	250 – 295	°C	
Rear - Zone 1 Temperature	240 – 280	°C	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Mold Temperature	50 – 80	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	35 – 75	rpm	
Shot to Cylinder Size	40 – 60	%	
Vent Depth	0.038 – 0.076	mm	

DISCLAIMER