

LEXANTTM HEALTHCARE RESIN HP2NR

REGION EUROPE

DESCRIPTION

LEXAN HP2NR is a medium flow polycarbonate (PC) with an MVR (300°C/1.2kg) of 16. This is a biocompatible (ISO10993 or USP Class VI) grade for medical devices and pharmaceutical applications. It is EtO and steam sterilizable, contains no mold release and adheres to our healthcare management of change policy.

TYPICAL PROPERTY VALUES

Revision 20250805

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	62	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	63	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	6.4	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	120	%	ASTM D638
Tensile Modulus, 50 mm/min	2350	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	100	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2350	MPa	ASTM D790
Taber Abrasion, CS-17, 1 kg	10	mg/1000cy	ASTM D1044
Tensile Stress, yield, 50 mm/min	63	MPa	ISO 527
Tensile Stress, break, 50 mm/min	70	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Tensile Strain, break, 50 mm/min	100	%	ISO 527
Tensile Modulus, 1 mm/min	2350	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2300	MPa	ISO 178
Ball Indentation Hardness, H358/30	95	MPa	ISO 2039-1
IMPACT			
Izod Impact, notched, 23°C	800	J/m	ASTM D256
Izod Impact, notched, -30°C	125	J/m	ASTM D256
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	60	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	65	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80°10°3 sp=62mm	10	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			
Vicat Softening Temp, Rate B/50	143	°C	ASTM D1525
Thermal Conductivity	0.2	W/m·°C	ISO 8302
CTE, 23°C to 80°C, flow	7.0E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	143	°C	ISO 306
Vicat Softening Temp, Rate B/120	140	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120°10°4 sp=100mm	133	°C	ISO 75/Be

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	122	°C	ISO 75/Ae
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	127	°C	ISO 75/Af
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
PHYSICAL			
Specific Gravity	1.2	-	ASTM D792
Melt Flow Rate, 300°C/1.2 kgf	17.5	g/10 min	ASTM D1238
Mold Shrinkage on Tensile Bar, flow	0.5 – 0.7	%	SABIC method
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.7	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.5 – 0.7	%	SABIC method
Density	1.2	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.35	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.15	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	16	cm³/10 min	ISO 1133
OPTICAL			
Light Transmission, 2.54 mm	88 – 90	%	ASTM D1003
Haze, 2.54 mm	0.8	%	ASTM D1003
Refractive Index	1.586	-	ASTM D542
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	2 – 4	Hrs	
Melt Temperature	280 – 300	°C	
Nozzle Temperature	270 – 2960	°C	
Front - Zone 3 Temperature	280 – 300	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Mold Temperature	80 – 100	°C	

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