

LEXANT™ RESIN 3212R

REGION AMERICAS

DESCRIPTION

LEXANT™ 3212R resin is a 20% glass fiber filled, 7 MFR polycarbonate, MVR of 7. It contains mold release. Available in natural and opaque colors.

TYPICAL PROPERTY VALUES

Revision 20260421

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	90	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	87.0	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	3.1	%	ASTM D638
Tensile Modulus, 5 mm/min	5500	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	156	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	5000	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	95	MPa	ISO 527
Tensile Stress, break, 5 mm/min	90	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.8	%	ISO 527
Tensile Strain, break, 5 mm/min	3.2	%	ISO 527
Tensile Modulus, 1 mm/min	6000	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	140	MPa	ISO 178
Flexural Modulus, 2 mm/min	5500	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	110	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	20.0	J	ASTM D3763
Izod Impact, unnotched 80°10'3 +23°C	35	kJ/m²	ISO 180/1U
Izod Impact, notched 80°10'3 +23°C	7.0	kJ/m²	ISO 180/1A
Izod Impact, notched 80°10'3 -30°C	6.0	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80°10'3 sp=62mm	6.0	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80°10'3 sp=62mm	5.0	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80°10'3 sp=62mm	40	kJ/m²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate B/50	147	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	141	°C	ASTM D648
CTE, -40°C to 40°C, flow	3.0E-5	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7.0E-5	1/°C	ASTM E831
CTE, 23°C to 80°C, flow	3.0E-5	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	7.0E-5	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	145	°C	ISO 306
Vicat Softening Temp, Rate B/120	146	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80°10'4 sp=64mm	141	°C	ISO 75/Bf
HDT/ Af, 1.8 MPa Flatw 80°10'4 sp=64mm	136	°C	ISO 75/ Af
PHYSICAL			
Density	1.34	g/cm³	ASTM D792

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CHEMISTRY THAT MATTERS™



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Mold Shrinkage, flow, 3.2 mm	0.20 – 0.50	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.20 – 0.50	%	SABIC method
Melt Flow Rate			
300°C / 1.2 kgf	7	g/10 min	ASTM D1238
Density	1.34	g/cm ³	ISO 1183
Water Absorption, (23°C/saturated)	0.29	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.12	%	ISO 62
Melt Volume Rate			
300°C / 1.2 kg	7.0	cm ³ /10 min	ISO 1133
ELECTRICAL			
Dielectric strength in oil, 2.0mm	34	kV/mm	IEC 60243-1
Volume Resistivity	>1.0E+15	Ω.cm	IEC 60093
Surface Resistivity, ROA	>1.0E+15	Ω	IEC 60093
Relative Permittivity, 1 MHz	3.30	-	IEC 60250
Dissipation Factor			
50/60 hZ	0.020	-	IEC 60250
1 MHz	0.010	-	IEC 60250
Relative Permittivity, 50/60 Hz	3.30	-	IEC 60250
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	3.0 – 4.0	Hrs	
Drying Time (Cumulative)	48	Hrs	
Maximum Moisture Content	0.020	%	
Nozzle Temperature	280 – 305	°C	
Front - Zone 3 Temperature	290 – 310	°C	
Middle - Zone 2 Temperature	275 – 300	°C	
Rear - Zone 1 Temperature	265 – 290	°C	
Mold Temperature	70 – 95	°C	
Back Pressure	0.300 – 0.700	MPa	
Screw Speed	40 – 70	rpm	
Vent Depth	0.025 – 0.076	mm	

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