LEXAN™ RESIN OQ1022

REGION ASIA

DESCRIPTION

LEXAN™ OQ1022 resin is an optical quality polycarbonate. High purity resin for CD, DVD and BD applications at short cycle times (not UV stabilized). Produced in dedicated equipment with stringent production control conditions.

TYPICAL PROPERTY VALUES

Revision 20210128

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	61	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	51	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	100	%	ASTM D638
Tensile Modulus, 50 mm/min	2420	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	93	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2460	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	61	MPa	ISO 527
Tensile Stress, break, 50 mm/min	56	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5.9	%	ISO 527
Tensile Strain, break, 50 mm/min	108	%	ISO 527
Tensile Modulus, 1 mm/min	2440	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2400	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	550	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	46	J	ASTM D3763
Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	14	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	40	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate B/50	140	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	123	°C	ASTM D648
CTE, -40°C to 40°C, flow	8.1E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7.2E-05	1/°C	ASTM E831
CTE, 23°C to 80°C, flow	7.E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	7.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	NB	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	140	°C	ISO 306
Vicat Softening Temp, Rate B/120	141	°C	ISO 306
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	121	°C	ISO 75/Ae
PHYSICAL			
Specific Gravity	1.19	-	ASTM D792

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Mold Shrinkage, flow, 3.2 mm	0.6 – 0.8	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	-0.1 - 0	%	SABIC method
Melt Flow Rate, 250°C/1.2 kgf	11	g/10 min	ASTM D1238
Density	1.19	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.2	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.2	%	ISO 62
Melt Volume Rate, MVR at 250°C/1.2 kg	10	cm³/10 min	ISO 1133
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	48	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	305 – 330	°C	
Nozzle Temperature	305 – 330	°C	
Front - Zone 3 Temperature	305 – 330	°C	
Middle - Zone 2 Temperature	295 – 320	°C	
Rear - Zone 1 Temperature	280 – 310	°C	
Mold Temperature	65 – 95	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	60 – 200	rpm	

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