

LEXAN™ OQ1022 resin

Polycarbonate

SABIC Innovative Plastics

Message:

Standard Flow OQ Resin

General Information			
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (250°C/1.2 kg)	11	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (250°C/1.2 kg)	10.6	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Flow : 3.20 mm	0.60 to 0.80	%	
Across Flow : 3.20 mm	-0.10 to 0.0	%	
Water Absorption			ISO 62
Saturation, 23°C	0.20	%	
Equilibrium, 23°C, 50% RH	0.20	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2420	MPa	ASTM D638
--	2440	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	61.0	MPa	ASTM D638
Yield	61.0	MPa	ISO 527-2/50
Break ³	51.0	MPa	ASTM D638
Break	56.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	6.0	%	ASTM D638
Yield	5.9	%	ISO 527-2/50
Break ⁵	100	%	ASTM D638
Break	110	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁶	2460	MPa	ASTM D790
-- ⁷	2400	MPa	ISO 178
Flexural Stress			
--	90.0	MPa	ISO 178
Break, 50.0 mm Span ⁸	93.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method

Charpy Notched Impact Strength ⁹			ISO 179/1eA
-30°C	11	kJ/m ²	
23°C	40	kJ/m ²	
Charpy Unnotched Impact Strength ¹⁰			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact			
-30°C	No Break		ASTM D256
23°C	550	J/m	ASTM D256
-30°C ¹¹	11	kJ/m ²	ISO 180/1A
23°C ¹²	14	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹³			ISO 180/1U
-30°C	No Break		
23°C	No Break		
Instrumented Dart Impact (23°C, Total Energy)	46.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed, 3.20 mm	123	°C	ASTM D648
1.8 MPa, Unannealed, 100 mm Span ¹⁴	121	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	140	°C	ASTM D1525, ISO 306/B50 ¹⁵
--	141	°C	ISO 306/B120
CLTE			
Flow : -40 to 40°C	8.1E-5	cm/cm/°C	ASTM E831
Flow : 23 to 80°C	7.0E-5	cm/cm/°C	ISO 11359-2
Transverse : -40 to 40°C	7.2E-5	cm/cm/°C	ASTM E831
Transverse : 23 to 80°C	7.0E-5	cm/cm/°C	ISO 11359-2
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	3.0 to 4.0	hr	
Drying Time, Maximum	48	hr	
Suggested Max Moisture	0.020	%	
Rear Temperature	282 to 310	°C	
Middle Temperature	293 to 321	°C	
Front Temperature	304 to 332	°C	
Nozzle Temperature	304 to 332	°C	
Processing (Melt) Temp	304 to 332	°C	
Mold Temperature	65.6 to 93.3	°C	
Back Pressure	0.345 to 0.689	MPa	
Screw Speed	60 to 200	rpm	
NOTE			

1.	50 mm/min
2.	Type I, 50 mm/min
3.	Type I, 50 mm/min
4.	Type I, 50 mm/min
5.	Type I, 50 mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	1.3 mm/min
9.	80*10*3 sp=62mm
10.	80*10*3 sp=62mm
11.	80*10*3
12.	80*10*3
13.	80*10*3
14.	120*10*4 mm
15.	Rate B (120°C/h), Loading 2 (50 N)

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

