

LEXAN™ OQ4005 resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

High Viscosity, UV-stabilized PC for ophthalmic lenses.

General Information			
Additive	UV Stabilizer		
Features	Good UV Resistance		
	High Viscosity		
Uses	Lenses		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	ASTM D792
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	8.00	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Flow	0.77	%	
Across Flow	0.77	%	
Water Absorption (Saturation, 23°C)	0.14	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹	2310	MPa	ASTM D638
Tensile Strength ²			ASTM D638
Yield	64.0	MPa	
Break	60.0	MPa	
Tensile Elongation ³			ASTM D638
Yield	6.0	%	
Break	78	%	
Flexural Modulus ⁴ (50.0 mm Span)	2310	MPa	ASTM D790
Flexural Stress			
--	97.0	MPa	ISO 178
Yield, 50.0 mm Span ⁵	96.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-30°C	130	J/m	
23°C	910	J/m	
Unnotched Izod Impact			ASTM D4812
-30°C	No Break		
23°C	No Break		

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed, 6.40 mm)	129	°C	ASTM D648
Vicat Softening Temperature	145	°C	ASTM D1525 ⁶
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE			ISO 11359-2
Flow : -40 to 40°C	6.1E-5	cm/cm/°C	
Transverse : -40 to 40°C	6.2E-5	cm/cm/°C	
Electrical	Nominal Value		Test Method
Dielectric Constant (1.10 GHz)	2.80		Internal Method
Dissipation Factor (1.10 GHz)	6.3E-3		Internal Method
Optical	Nominal Value	Unit	Test Method
Transmittance (2540 μm)	87.0	%	ASTM D1003
Haze (2540 μm)	0.40	%	ASTM D1003
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	2.0 to 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	60.0 to 80.0	°C	
Rear Temperature	260 to 280	°C	
Middle Temperature	270 to 290	°C	
Front Temperature	280 to 310	°C	
Nozzle Temperature	270 to 290	°C	
Processing (Melt) Temp	280 to 310	°C	
Mold Temperature	80.0 to 110	°C	
NOTE			
1.	50 mm/min		
2.	Type I, 50 mm/min		
3.	Type I, 50 mm/min		
4.	1.3 mm/min		
5.	1.3 mm/min		
6.	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



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