

# SABIC LEXAN™ OQ3420

Medium Viscosity, UV-stabilized grade for ophthalmic lenses.  
Information provided by SABIC

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC method
Melt Flow	10.5 g/10 min @Load 1.20 kg, Temperature 300 °C	10.5 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	65.0 MPa	9430 psi	50 mm/min; ASTM D638
Tensile Strength, Yield	62.0 MPa	8990 psi	50 mm/min; ASTM D638
Flexural Yield Strength	93.0 MPa	13500 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.34 GPa	339 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	7.47 J/cm	14.0 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	137 °C @Thickness 6.40 mm	279 °F @Thickness 0.252 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	132 °C @Thickness 6.40 mm	270 °F @Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	152 °C	306 °F	Rate B/50; ASTM D1525

Optical Properties	Metric	English	Comments
Refractive Index	1.586	1.586	ASTM D542
Haze	1.0 % @Thickness 2.54 mm	1.0 % @Thickness 0.100 in	ASTM D1003
Transmission, Visible	89 % @Thickness 2.54 mm	89 % @Thickness 0.100 in	ASTM D1003

Processing Properties	Metric	English	Comments
Nozzle Temperature	290 - 310 °C	554 - 590 °F	Injection Molding
Zone 1	270 - 295 °C	518 - 563 °F	
Zone 2	280 - 305 °C	536 - 581 °F	
Zone 3	295 - 315 °C	563 - 599 °F	
Melt Temperature	295 - 315 °C	563 - 599 °F	

Mold Temperature	70.0 - 95.0 °C	158 - 203 °F	
Drying Temperature	120 °C	248 °F	Injection Molding
Dry Time	3.00 - 4.00 hour	3.00 - 4.00 hour	Injection Molding
	48.0 hour	48.0 hour	Cumulative; Injection Molding
Moisture Content	0.020 %	0.020 %	
Back Pressure	0.300 - 0.700 MPa	43.5 - 102 psi	
Shot Size	40 - 60 %	40 - 60 %	
Vent Depth	0.00250 - 0.00760 cm	0.000984 - 0.00299 in	
Screw Speed	40 - 70 rpm	40 - 70 rpm	

#### Descriptive Properties

Purity, particles per gram > 50 microns	1	SABIC method
Purity, particles per gram 20-50 microns	40	SABIC method