Zenite LCP

liquid crystal polymer resin

Zenite 3226L BK010

Lubricated 10% Glass, 30% Mineral Reinforced LCP Resin

Zenite 3226L is a lubricated 10% glass and 30% mineral reinforced LCP resin having excellent toughness and dimensional stability.

Property	Test Method	Units	Value
Mechanical			
Stress at Break, 1.0mm	ISO 527-1/-2	MPa (kpsi)	
-40°C (-40°F)			160 (23.2)
-30°C (-22°F)			150 (21.8)
23°C (73°F)			130 (18.9)
120°C (248°F)			50 (7.3)
150°C (302°F)			35 (5.1)
200°C (392°F)			20 (2.9)
250°C (482°F)			12 (1.7)
Stress at Break, 2.0mm	ISO 527-1/-2	MPa (kpsi)	
-40°C (-40°F)			155 (22.5)
-30°C (-22°F)			145 (21)
23°C (73°F)			125 (18.1)
120°C (248°F)			50 (7.3)
150°C (302°F)			40 (5.9)
200°C (392°F)			25 (3.6)
250°C (482°F)			11 (1.6)

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc.
ISO Mechanical properties measured at 4.0mm, ISO Electrical properties measured at 2.0mm, and all ASTM properties measured at 3.2mm.
Test temperatures are 23°C unless otherwise stated.

During molding, use protective equipment and clothing. Skin contact with molten Zenite resins can cause severe burns. Be particularly alert during purging.

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Mechanical			
Stress at Break, 4.0mm	ISO 527-1/-2	MPa (kpsi)	
-40°C (-40°F)			150 (21.8)
-30°C (-22°F)			140 (20.3)
23°C (73°F)			115 (16.7)
120°C (248°F)			50 (7.3)
150°C (302°F)			40 (5.9)
200°C (392°F)			25 (3.6)
250°C (482°F)			11 (1.6)
Strain at Break, 1.0mm	ISO 527-1/-2	%	
-40°C (-40°F)			0.9
-30°C (-22°F)			1
23°C (73°F)			1.1
120°C (248°F)			1
150°C (302°F)			1.0
200°C (392°F)			1.1
250°C (482°F)			0.7
Strain at Break, 2.0mm	ISO 527-1/-2	%	
-40°C (-40°F)			1.1
-30°C (-22°F)			1.1
23°C (73°F)			1.3
120°C (248°F)			1.2
150°C (302°F)			1.2
200°C (392°F)			1.2
250°C (482°F)			0.9

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Property	Test Method	Units	Value
Mechanical			
Strain at Break, 4.0mm	ISO 527-1/-2	%	
-40°C (-40°F)			1.2
-30°C (-22°F)			1.2
23°C (73°F)			1.4
120°C (248°F)			1.3
150°C (302°F)			1.5
200°C (392°F)			1.2
250°C (482°F)			1
Tensile Modulus, 1.0mm	ISO 527-1/-2	MPa (kpsi)	
-40°C (-40°F)			21000 (3050)
-30°C (-22°F)			19000 (2750)
23°C (73°F)			16400 (2400)
120°C (248°F)			8500 (1230)
150°C (302°F)			6600 (960)
200°C (392°F)			4700 (680)
250°C (482°F)			1500 (220)
Tensile Modulus, 2.0mm	ISO 527-1/-2	MPa (kpsi)	
-40°C (-40°F)			20200 (2950)
-30°C (-22°F)			19000 (2750)
23°C (73°F)			16000 (2300)
120°C (248°F)			8400 (1220)
150°C (302°F)			6500 (940)
200°C (392°F)			4600 (670)
250°C (482°F)			1700 (250)

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Property	Test Method	Units	Value
Mechanical			
Tensile Modulus, 4.0mm	ISO 527-1/-2	MPa (kpsi)	
-40°C (-40°F)			17800 (2575)
-30°C (-22°F)			16700 (2400)
23°C (73°F)			14800 (2150)
120°C (248°F)			7900 (1150)
150°C (302°F)			6000 (870)
200°C (392°F)			4500 (650)
250°C (482°F)			2400 (350)
Flexural Modulus, 1.0mm	ISO 178	MPa (kpsi)	
-40°C (-40°F)			23700 (3450)
-30°C (-22°F)			21000 (3050)
23°C (73°F)			18900 (2750)
120°C (248°F)			8400 (1220)
150°C (302°F)			7200 (1050)
200°C (392°F)			4500 (650)
250°C (482°F)			2000 (290)
Flexural Modulus, 2.0mm	ISO 178	MPa (kpsi)	
-40°C (-40°F)			18700 (2700)
-30°C (-22°F)			16200 (2350)
23°C (73°F)			14500 (2100)
120°C (248°F)			8000 (1160)
150°C (302°F)			6300 (910)
200°C (392°F)			4400 (640)
250°C (482°F)			1800 (260)

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Property	Test Method	Units	Value
Mechanical			
Flexural Modulus, 4.0mm	ISO 178	MPa (kpsi)	
-40°C (-40°F)			17600 (2550)
-30°C (-22°F)			15200 (2200)
23°C (73°F)			12300 (1780)
120°C (248°F)			7300 (1060)
150°C (302°F)			5700 (830)
200°C (392°F)			3400 (490)
250°C (482°F)			1750 (255)
Flexural Strength, 1.0mm	ISO 178	MPa (kpsi)	
-40°C (-40°F)			290 (42)
-30°C (-22°F)			270 (40)
23°C (73°F)			205 (29.7)
120°C (248°F)			80 (11.6)
150°C (302°F)			55 (8)
200°C (392°F)			30 (4.4)
250°C (482°F)			13 (1.9)
Flexural Strength, 2.0mm	ISO 178	MPa (kpsi)	
-40°C (-40°F)			250 (36.3)
-30°C (-22°F)			235 (34)
23°C (73°F)			180 (26.1)
120°C (248°F)			75 (10.9)
150°C (302°F)			50 (7.3)
200°C (392°F)			28 (4.1)
250°C (482°F)			11 (1.6)

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Property	Test Method	Units	Value
Mechanical			
Flexural Strength, 4.0mm	ISO 178	MPa (kpsi)	
-40°C (-40°F)			210 (30.4)
-30°C (-22°F)			200 (29)
23°C (73°F)			160 (23.2)
120°C (248°F)			65 (9.4)
150°C (302°F)			45 (6.5)
200°C (392°F)			25 (3.6)
250°C (482°F)			10 (1.5)
Notched Izod Impact	ISO 180/1A	kJ/m^2	
-40°C (-40°F)			7
-30°C (-22°F)			7
23°C (73°F)			8
Unnotched Izod Impact	ISO 180/1U	kJ/m^2	
-40°C (-40°F)			10
-30°C (-22°F)			13
23°C (73°F)			15
Notched Charpy Impact	ISO 179/1eA	kJ/m^2	
-40°C (-40°F)			5
-30°C (-22°F)			5
23°C (73°F)			5
Unnotched Charpy Impact	ISO 179/1eU	kJ/m^2	
-40°C (-40°F)			10
-30°C (-22°F)			11
23°C (73°F)			15
Thermal			
Deflection Temperature	ISO 75-1/-2	°C (°F)	
1.80MPa, 4mm			235 (455)

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Property	Test Method	Units	Value
Electrical			
Surface Resistivity	IEC 60093	ohm	>1E15
Relative Permittivity	IEC 60250		
23°C (73°F), 1E3 Hz			4.3
120°C (248°F), 1E3 Hz			5.7
150°C (302°F), 1E3 Hz			6.2
23°C (73°F), 1E6 Hz			4.6
120°C (248°F), 1E6 Hz			5.1
150°C (302°F), 1E6 Hz			5.9
Volume Resistivity	IEC 60093	ohm m	>1E14
Dissipation Factor	IEC 60250	E-4	
23°C (73°F), 1E3 Hz			210
120°C (248°F), 1E3 Hz			140
150°C (302°F), 1E3 Hz			140
23°C (73°F), 1E6 Hz			210
120°C (248°F), 1E6 Hz			550
150°C (302°F), 1E6 Hz			570
Electric Strength	IEC 60243-1	kV/mm	
23°C (73°F)			26
120°C (248°F)			27
150°C (302°F)			28
Flammability			
Oxygen Index	ISO 4589	%	50
Other			
Density	ISO 1183	kg/m^3 (g/cm^3)	1735 (1.73)
Molding Shrinkage	ISO 294-4	%	
Normal			0.27
Parallel			0.0

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Property	Test Method	Units	Value
Processing			
Melt Temperature Range		°C (°F)	345-355 (653-670)
Melt Temperature Optimum		°C (°F)	350 (662)
Mold Temperature Range		°C (°F)	30-150 (85-300)
Mold Temperature Optimum		°C (°F)	90 (194)
Drying Time, Dehumidified Dryer		h	2
Drying Temperature		°C (°F)	135 (275)
Processing Moisture Content		%	<0.01

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