

ZENITE® ZE88410NXL - LCP

Description

40% glass reinforced, high weld-line strength, low warpage and with added lubricity. Chemical abbreviation according to ISO 1043-1 : LCP

Physical properties	Value	Unit	Test Standard
Density	104	lb/ft ³	ISO 1183
Molding shrinkage, parallel	0.3	%	ISO 294-4, 2577
Molding shrinkage, normal	0.6	%	ISO 294-4, 2577

Mechanical properties	Value	Unit	Test Standard
Tensile modulus	2.31E6	psi	ISO 527-2/1A
Tensile stress at break, 5mm/min	18900	psi	ISO 527-2/1A
Tensile strain at break, 5mm/min	1	%	ISO 527-2/1A
Flexural modulus, 23°C	2.29E6	psi	ISO 178
Flexural strength, 23°C	29000	psi	ISO 178
Izod impact notched, 23°C	3.81	ft-lb/in ²	ISO 180/1A

Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	622	°F	ISO 11357-1/-3
DTUL at 1.8 MPa	505	°F	ISO 75-1, -2
Vicat softening temperature, 50°C/h 50N	462	°F	ISO 306
Coeff. of linear therm expansion, parallel	0.0667	E-4/°F	ISO 11359-2
Coeff. of linear therm expansion, normal	0.456	E-4/°F	ISO 11359-2
Flammability at thickness h	V-0	class	UL 94
thickness tested (h)	0.0098	in	UL 94

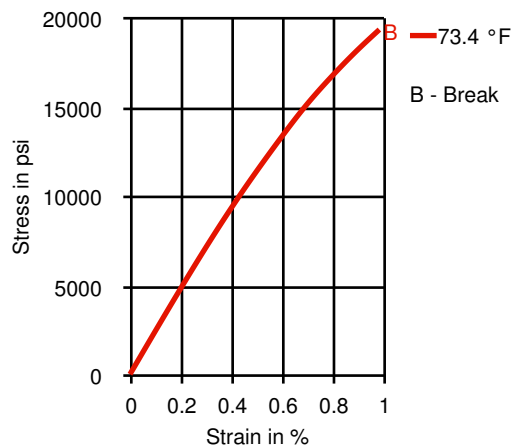
Electrical properties	Value	Unit	Test Standard
Surface resistivity	1E17	Ohm	IEC 60093
Electric strength	838	kV/in	IEC 60243-1



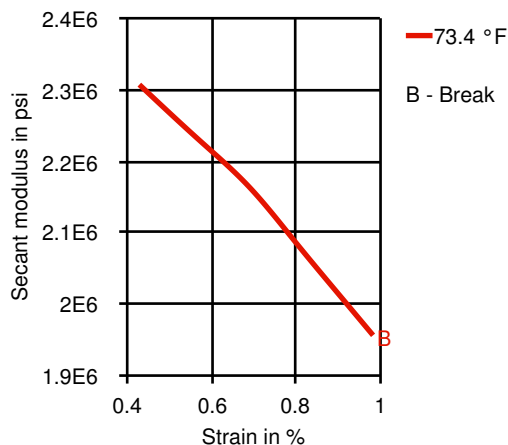
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Diagrams

Stress-strain



Secant modulus-strain



Typical injection moulding processing conditions

Pre Drying	Value	Unit	Test Standard
Necessary low maximum residual moisture content	0.01	%	-
Drying time	4 - 24	h	-
Drying temperature	302	°F	-
Temperature	Value	Unit	Test Standard
Hopper temperature	68 - 86	°F	-
Feeding zone temperature	140 - 176	°F	-
Zone1 temperature	599 - 617	°F	-
Zone2 temperature	617 - 635	°F	-
Zone3 temperature	626 - 644	°F	-
Zone4 temperature	635 - 653	°F	-
Nozzle temperature	635 - 653	°F	-
Melt temperature	635 - 653	°F	-
Mold temperature	212 - 266	°F	-
Hot runner temperature	635 - 653	°F	-
Pressure	Value	Unit	Test Standard
Injection pressure	500 - 1500	bar	-
Hold pressure	500 - 1500	bar	-
Back pressure max.	30	bar	-
Speed	Value	Unit	Test Standard
Injection speed	very fast	-	-
Screw Speed	Value	Unit	Test Standard
Screw speed diameter, 16mm	200	RPM	-
Screw speed diameter, 25mm	140	RPM	-
Screw speed diameter, 40mm	80	RPM	-

Other text information

Pre-drying

LCP should in principle be predried. Because of the necessary low maximum residual moisture content the use of dry air dryers is recommended. The dew point should be $\leq -40^{\circ}\text{C}$. The time between drying and processing should be as short as possible.

Longer pre-drying times/storage

For subsequent storage of the material in the dryer until processed the temperature does not need to be lowered for grades A, B, C, D and V (≤ 24 h).

