Zytel® FE5382 BK276

PA612-GF33 Celanese

Product Texts

Zytel® LCPA long chain polyamide resins provide an innovative and growing portfolio of flexible polymers with excellent thermal, chemical, and hydrolysis resistance. The diverse selection of Zytel® LCPA grades is targeted for a range of performance characteristics, balancing temperature resistance, flexibility and low permeation.

Zytel® FE5382 BK276 is a 33% glass fiber reinforced, heat stabilized, black polyamide 612 resin developed for electrical bobbins and encapsulation applications.

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
[C] Molding shrinkage, parallel	**0.3 / ***	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**0.9 / ***	%	ISO 294-4, 2577
[C] Density of melt	**1120**	kg/m³	-
[C] Thermal conductivity of melt	**0.26**	W/(m K)	-
[C] Spec. heat capacity of melt	**2130**	J/(kg K)	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**10000 / 8000**	MPa	ISO 527
[C] Stress at break	**180 / 150**	MPa	ISO 527
[C] Strain at break	**3 / 4**	%	ISO 527
[C] Charpy notched impact strength, +23°C	**12 / -**	kJ/m²	ISO 179/1eA
ASTM Data			
Tensile Strength	**165 / -**	MPa	ASTM D 638
Elongation at Break	**2.5 / -**	%	ASTM D 638
Flexural Modulus	**8965 / -**	MPa	ASTM D 790
Flexural Strength	**248 / -**	MPa	ASTM D 790
Izod Impact notched, 1/8 in	**107 / -**	J/m	ASTM D 256

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Melting temperature, 10°C/min	**218 / ***	°C	ISO 11357-1/-3
[C] Temp. of deflection under load, 1.80 MPa	**200 / ***	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**216 / ***	°C	ISO 75-1/-2
[C] Coeff. of linear therm. expansion, parallel	**20 / ***	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	**110 / ***	E-6/K	ISO 11359-1/-2
[C] Burning Behav. at 1.5 mm nom. thickn.	**HB / ***	class	IEC 60695-11-10
Thickness tested	**1.5 / ***	mm	-
Yellow Card available	**yes / ***	-	-
[C] Burning Behav. at thickness h	**HB / ***	class	IEC 60695-11-10
Thickness tested	**0.8 / ***	mm	-
Yellow Card available	**yes / ***	-	-
[C] Burning rate, FMVSS, Thickness 1 mm	**23**	mm/min	ISO 3795 (FMVSS 302)
ASTM Data			
UL 94 Flame rating	**HB**	-	UL 94
Thickness tested	**1.5**	mm	-
DTUL @ 66 psi	**205**	°C	ASTM D 648
DTUL @ 264 psi	**200**	°C	ASTM D 648
Melting Temperature	**219**	°C	ASTM D 3418

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Volume resistivity	**1E13 / 1E12**	Ohm*m	IEC 62631-3-1
[C] Surface resistivity	*** / >1E15**	Ohm	IEC 62631-3-2
[C] Electric strength	**34 / -**	kV/mm	IEC 60243-1

[C] Comparative tracking index	**600 / 600**	-	IEC 60112

[C]: CAMPUS

Other properties	**dry / cond**	**Unit**	**Test Standard**
[C] Water absorption	**1.8 / ***	%	Sim. to ISO 62
[C] Humidity absorption	**0.8 / ***	%	Sim. to ISO 62
[C] Density	**1320 / -**	kg/m³	ISO 1183
Density	**1320**	kg/m³	ASTM D 792

[C]: CAMPUS

Material specific properties	**dry / cond**	**Unit**	**Test Standard**
ISO Data			
[C] Viscosity number	**105 / ***	cm³/g	ISO 307, 1157, 1628

[C]: CAMPUS

Characteristics

Processing
Injection Molding

Delivery form
Pellets, Black

Additives
Lubricants, Release agent

Special Characteristics
Heat stabilized or stable to heat

Applications
Electrical and Electronical, Encapsulation

Regional Availability
North America, Europe, Asia Pacific, South and Central America, Near East/Africa