Zytel® SC310 NC010

PA66 Celanese

Product Texts

Zytel® SC310 NC010 is a lubricated polyamide 66 resin for injection molding. It has been developed for consideration into applications such as parts for the healthcare industry.

SPECIAL CONTROL for HEALTHCARE APPLICATIONS

This product is manufactured according to Good Manufacturing Practice (GMP) principles and generally accepted in food contact applications in Europe and the USA when meeting applicable use conditions. This product is also tested against selected ISO 10993 parts including 10993-5 and -11 as well as USP class VI. For details, individual compliance statements are available from our representative.

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
[C] Molding shrinkage, parallel	**1.4 / ***	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**1.4 / ***	%	ISO 294-4, 2577
[C] Density of melt	**970**	kg/m³	-
[C] Thermal conductivity of melt	**0.16**	W/(m K)	-
[C] Spec. heat capacity of melt	**2790**	J/(kg K)	-
[C] Eff. thermal diffusivity	**5E-8**	m²/s	-
[C] Ejection temperature	**190**	°C	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**3100 / 1400**	MPa	ISO 527
[C] Yield stress	**82 / 55**	MPa	ISO 527
[C] Yield strain	**4.5 / 25**	%	ISO 527
[C] Nominal strain at break	**25 / >50**	%	ISO 527
[C] Tensile creep modulus, 1h	*** / 1400**	MPa	ISO 899-1
[C] Tensile creep modulus, 1000h	*** / 820**	MPa	ISO 899-1
[C] Charpy impact strength, +23°C	**N / N**	kJ/m²	ISO 179/1eU
[C] Charpy impact strength, -30°C	**400 / N**	kJ/m²	ISO 179/1eU
[C] Charpy notched impact strength, +23°C	**5.5 / 15**	kJ/m²	ISO 179/1eA
[C] Charpy notched impact strength, -30°C	**4.5 / 3**	kJ/m²	ISO 179/1eA

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Melting temperature, 10°C/min	**262 / ***	°C	ISO 11357-1/-3
[C] Glass transition temperature, 10°C/min	**60 / ***	°C	ISO 11357-1/-2
[C] Temp. of deflection under load, 1.80 MPa	**70 / ***	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**200 / ***	°C	ISO 75-1/-2
[C] Vicat softening temperature, B	**240 / ***	°C	ISO 306
[C] Coeff. of linear therm. expansion, parallel	**100 / ***	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.	**V-2 / ***	class	IEC 60695-11-10
Thickness tested	**1.5 / ***	mm	-
Yellow Card available	**yes / ***	-	-
[C] Burning Behav. at thickness h	**V-2 / ***	class	IEC 60695-11-10
Thickness tested	**0.7 / ***	mm	-
[C] Oxygen index	**28 / ***	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Relative permittivity, 100Hz	**3.8 / 6**	-	IEC 62631-2-1
[C] Relative permittivity, 1MHz	**3.5 / 4**	-	IEC 62631-2-1
[C] Dissipation factor, 100Hz	**80 / 2100**	E-4	IEC 62631-2-1
[C] Dissipation factor, 1MHz	**180 / 750**	E-4	IEC 62631-2-1
[C] Volume resistivity	**1E12 / 1E10**	Ohm*m	IEC 62631-3-1

[C] Surface resistivity	*** / 1E12**	Ohm	IEC 62631-3-2
[C] Electric strength	**32 / 28**	kV/mm	IEC 60243-1
[C] Comparative tracking index	**600 / -**	-	IEC 60112

[C]: CAMPUS

Other properties	**dry / cond**	**Unit**	**Test Standard**
[C] Water absorption	**8.5 / ***	%	Sim. to ISO 62
[C] Humidity absorption	**2.6 / ***	%	Sim. to ISO 62
[C] Density	**1140 / -**	kg/m³	ISO 1183

[C]: CAMPUS

Film Properties	**dry / cond**	**Unit**	**Test Standard**
ISO Data			
[C] Strain at yield, parallel	**4.5 / ***	%	ISO 527-3

[C]: CAMPUS

Material specific properties	**dry / cond**	**Unit**	**Test Standard**
ISO Data			
[C] Viscosity number	**150 / ***	cm³/g	ISO 307, 1157, 1628

[C]: CAMPUS

Characteristics

Processing
Injection Molding

Delivery form
Pellets

Additives
Lubricants, Release agent

Certifications
Food contact, Medical Grade, Biocompatibility ISO 10993, US Pharmacopeia Class VI Approved

Applications
Medical

Regional Availability
North America, Europe, Asia Pacific, South and Central America

Other text information

Injection molding
POSTPROCESSING

Annealing: 30min at 200°C