Vydyne® 21SPC

PA66 Ascend

Product Texts

Vydyne 21SPC is a general-purpose, unfilled, lubricated, PA66 resin. Designed principally for injection-molding fabrication, this product offers a combination of engineering properties characterized by high strength; rigidity; good toughness; high melt point; good surface lubricity; abrasion resistance; and resistance to many chemicals, machine and motor oils, solvents and gasoline.

21SPC permits production of molded parts with good initial color plus good property and color retention when using regrind.

21SPC is intended for use in high-productivity applications. In many applications, the molding cycle can be reduced because parts may be removed from the cavity at higher temperatures. In difficult molds where parts have a tendency to stick in the cavity, 21SPC can reduce or eliminate the need for mold release sprays. Critical molded-part dimensions should be checked against specifications before implementing shorter molding cycles on a routine production basis.

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
[C] Molding shrinkage, parallel	**1.8 / ***	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**1.7 / ***	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**2800 / 1800**	MPa	ISO 527
[C] Yield stress	**86 / 56**	MPa	ISO 527
[C] Yield strain	**4.8 / 22**	%	ISO 527
[C] Charpy impact strength, +23°C	**N / N**	kJ/m²	ISO 179/1eU
[C] Charpy impact strength, -30°C	**N / N**	kJ/m²	ISO 179/1eU
[C] Charpy notched impact strength, +23°C	**6 / 20**	kJ/m²	ISO 179/1eA
[C] Charpy notched impact strength, -30°C	**5 / 7**	kJ/m²	ISO 179/1eA

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Melting temperature, 10°C/min	**260 / ***	°C	ISO 11357-1/-3
[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] Coeff. of linear therm. expansion, parallel	**100 / ***	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	**100 / ***	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	-
[C] Burning Behav. at thickness h	**V-2 / ***	class	IEC 60695-11-10
Thickness tested	**0.4 / ***	mm	-
[C] Oxygen index	**25 / ***	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Volume resistivity	**1E11 / -**	Ohm*m	IEC 62631-3-1
[C] Electric strength	**26 / -**	kV/mm	IEC 60243-1
[C] Comparative tracking index	**600 / -**	-	IEC 60112

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
[C] Water absorption	**1.2 / ***	%	Sim. to ISO 62
[C] Humidity absorption	**2.4 / ***	%	Sim. to ISO 62
[C] Density	**1140 / -**	kg/m³	ISO 1183

[C]: CAMPUS

Characteristics

Processing
Injection Molding

Delivery form
Pellets, Natural Color

Additives
Lubricants, Release agent

Chemical Resistance
General Chemical Resistance, Solvent Resistance, Oil Resistance

Certifications
Food contact, Food approval 10/2011, Food approval FDA 21 CFR, Drinking water contact, Drinking water contact NSF 61

Applications
Automotive, Electrical and Electronical, General Purpose

Regional Availability
North America, Europe, Asia Pacific