Vydyne® 21SPF BLK

PA66 Ascend

Product Texts

Vydyne 21SPF BLK is a general-purpose, unfilled, lubricated PA66 resin with an enhanced crystallization temperature. Designed principally to decrease cycle time 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.

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
[C] Molding shrinkage, parallel	**2.0 / ***	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**2.0 / ***	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**3300 / 1600**	MPa	ISO 527
[C] Yield stress	**88 / 55**	MPa	ISO 527
[C] Yield strain	**5 / 20**	%	ISO 527
Flexural modulus, 23°C	**3300 / 1050**	MPa	ISO 178
Flexural strength	**105 / 30**	MPa	ISO 178
[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 / 23**	kJ/m²	ISO 179/1eA
[C] Charpy notched impact strength, -30°C	**5 / 7**	kJ/m²	ISO 179/1eA
Izod notched impact strength, +23°C	**6 / 23**	kJ/m²	ISO 180/1A
Izod notched impact strength	**5 / 7**	kJ/m²	ISO 180/1A
Temperature	**-30**	°C	-

[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	**72 / ***	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**210 / ***	°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	**26 / ***	%	ISO 4589-1/-2
Glow Wire Flammability Index (GWFI)	**960**	°C	IEC 60695-2-12
GWFI - thickness tested (1)	**0.4**	mm	-
Glow Wire Flammability Index (GWFI)	**960**	°C	IEC 60695-2-12
GWFI - thickness tested (2)	**0.71**	mm	-
Glow Wire Flammability Index (GWFI)	**960**	°C	IEC 60695-2-12
GWFI - thickness tested (3)	**1.5**	mm	-
Glow Wire Ignition Temperature (GWIT)	**825**	°C	IEC 60695-2-13
GWIT - thickness tested (1)	**0.4**	mm	-
Glow Wire Ignition Temperature (GWIT)	**850**	°C	IEC 60695-2-13
GWIT - thickness tested (2)	**0.71**	mm	-
Glow Wire Ignition Temperature (GWIT)	**850**	°C	IEC 60695-2-13
GWIT - thickness tested (3)	**1.5**	mm	-
ASTM Data			
UL 94 Flame rating	**V-2**	-	UL 94
Thickness tested	**0.4**	mm	-

[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
ASTM Data			
Arc Resistance	**150 / -**	s	ASTM D 495

[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

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	**70**	°C	-
Pre-drying - Time	**1 - 3**	h	-
Melt temperature	**285 - 300**	°C	-
Mold temperature	**65 - 95**	°C	-
Zone 1	**260 - 280**	°C	-
Zone 2	**270 - 285**	°C	-
Zone 3	**280 - 290**	°C	-
Nozzle temperature	**280 - 300**	°C	-

Characteristics

Processing
Injection Molding

Delivery form
Pellets, Black

Additives
Lubricants, Release agent

Chemical Resistance
General Chemical Resistance, Solvent Resistance, Oil Resistance

Applications
Automotive, Electrical and Electronical, General Purpose

Regional Availability
North America, Europe, Asia Pacific