Vydyne® 20NSP1

PA66 Ascend

Product Texts

Vydyne 20NSP1 is a general-purpose, highly nucleated, enhanced crystallization temperature PA66 resin with an alternate internal lubricant. Designed to crystallize rapidly in order to reduce cycle times and increase productivity through faster part set-up.

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
[C] Molding shrinkage, parallel	**1.3 / ***	%	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	**3400 / 2300**	MPa	ISO 527
[C] Yield stress	**95 / 67**	MPa	ISO 527
[C] Yield strain	**5.2 / 18**	%	ISO 527
Flexural modulus, 23°C	**3200 / 1300**	MPa	ISO 178
Flexural strength	**100 / 35**	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	**4 / 6**	kJ/m²	ISO 179/1eA
[C] Charpy notched impact strength, -30°C	**3 / 3**	kJ/m²	ISO 179/1eA
Izod notched impact strength, +23°C	**6 / 15**	kJ/m²	ISO 180/1A
Izod notched impact strength	**5 / 5**	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	**262 / ***	°C	ISO 11357-1/-3
[C] Temp. of deflection under load, 1.80 MPa	**78 / ***	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**232 / ***	°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	-
Yellow Card available	**yes / ***	-	-
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)	**850**	°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			
Volume resistivity	**1E11 / -**	Ohm*m	IEC 62631-3-1

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	**1.6 / ***	%	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

Additives
Lubricants, Release agent

Features
Nucleated

Certifications
Food contact, Food approval 10/2011, Food approval FDA 21 CFR

Applications
Electrical and Electronical, General Purpose

Regional Availability
North America, Europe, Asia Pacific