

Vydyne® R220

polyamide 66



Vydyne R220 is a 40% mineral-reinforced PA66 resin formulated for improved impact strength. Available in natural, it is an injection-molding grade formulated to retain the inherent processing advantages of unreinforced PA66 while enhancing rigidity, strength and heat resistance. R220 maintains the chemical resistance typical of PA66 to a wide variety of chemicals, gasoline, oils, greases and solvents.

General

Regional Availability	• North America	• Europe	• Asia Pacific
Additive	• Heat Stabilizer		
Features	• Chemical Resistant • Good Impact Strength • Grease Resistant • Oil Resistant	• Ductile • Good Strength • High Heat Resistance • Solvent Resistant	• Gasoline Resistant • Good Toughness • High Rigidity
Uses	• Mineral Reinforced		
Agency Rating	• ASTM, D6779 PA114M40	• ASTM, D4066 PA114M40	
Automotive Specifications	• Chrysler MS-DB-41_CPN 2310	• Ford ESB-M4D353-A4	
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical

	dry	cond.	Unit	Test Standard
Density	1.48	-	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 23°C, 2.00 mm	1.0	*	%	
Flow : 23°C, 2.00 mm	1.1	*	%	
Water Absorption				ISO 62
23°C, 24 hr	1.1	*	%	
Equilibrium, 23°C, 50% RH	1.6	*	%	

Mechanical

	dry	cond.	Unit	Test Standard
Tensile Modulus (23°C)	6900	2600	MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	103	73	MPa	ISO 527-2
Tensile Strain (Yield, 23°C)	1.5	16	%	ISO 527-2
Tensile Strain (Break, 23°C)	6	30	%	ISO 527-2
Flexural Modulus (23°C)	6100	2300	MPa	ISO 178
Flexural Strength (23°C)	124	50	MPa	ISO 178
Poisson's Ratio (23°C)	0.4		-	ISO 527-2

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Impact	dry	cond.	Unit	Test Standard
Charpy Notched Impact Strength				ISO 179/1eA
+23°C	7	17	kJ/m²	
-30°C	6	8	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179/1eU
+23°C	140	N	kJ/m²	
-30°C	110	130	kJ/m²	
Notched Izod Impact Strength				ISO 180/1A
+23°C	9	16	kJ/m²	
-30°C	7	7	kJ/m²	

Thermal	dry	cond.	Unit	Test Standard
Heat Deflection Temperature				ISO 75-2/A
1.80 MPa, Unannealed	118	-	°C	
0.45 MPa, Unannealed	222	-	°C	
Melting Temperature	258	*	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	63	*	E-6/K	
Transverse : 23 to 55°C, 2.00 mm	60	*	E-6/K	

Injection	Value	Unit
Drying Temperature	80	°C
Drying Time	4	h
Rear Temperature	280 - 310	°C
Middle Temperature	280 - 310	°C
Front Temperature	280 - 310	°C
Nozzle temperature	280 - 310	°C
Processing (Melt) Temperature	285 - 305	°C
Mold Temperature	65 - 95	°C

