

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	
Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • North America
Filler / Reinforcement	• Mineral, 40% Filler by Weight
Additive	• Heat Stabilizer
Features	<ul style="list-style-type: none"> • Chemical Resistant • Ductile • Gasoline Resistant • Good Impact Resistance • Good Strength • Good Toughness • Grease Resistant • High Heat Resistance • High Rigidity • Impact Modified • Oil Resistant • Solvent Resistant
Uses	<ul style="list-style-type: none"> • Automotive Applications • Automotive Exterior Parts • Automotive Under the Hood • Cams • Gears • Housings • Industrial Applications • Power/Other Tools
Agency Ratings	• ASTM D4066 PA114M40 • ASTM D6779 PA114M40
UL File Number	• E70062
Appearance	• Natural Color
Forms	• Pellets
Processing Method	• Injection Molding

Physical	Dry	Conditioned	Unit	Test Method
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
24 hr, 23°C	1.1	--	%	
Equilibrium, 23°C, 50% RH	1.6	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	6900	2600	MPa	ISO 527-1
Tensile Stress (Break, 23°C)	103	73.0	MPa	ISO 527-2
Tensile Strain				ISO 527-2
Yield, 23°C	1.5	16	%	
Break, 23°C	6.0	30	%	
Flexural Modulus (23°C)	6100	2300	MPa	ISO 178
Flexural Stress (23°C)	124	50.0	MPa	ISO 178
Poisson's Ratio	0.40	--		ISO 527

Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-30°C	6.0	8.0	kJ/m ²	
23°C	7.0	17	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179
-30°C	110	130	kJ/m ²	
23°C	140 kJ/m ²	No Break		
Notched Izod Impact Strength				ISO 180
-30°C	7.0	7.0	kJ/m ²	
23°C	9.0	16	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	222	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	118	--	°C	ISO 75-2/A
Melting Temperature	258	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	6.3E-4	--	cm/cm/°C	
Transverse : 23 to 55°C, 2.00 mm	6.0E-4	--	cm/cm/°C	
Additional Information	Dry	Conditioned	Unit	Test Method
Automotive Materials - (thickness d = 1mm)	+	--		FMVSS 302
Injection	Dry	Unit		
Drying Temperature	80	°C		
Drying Time	4.0	hr		
Rear Temperature	280 to 310	°C		
Middle Temperature	280 to 310	°C		
Front Temperature	280 to 310	°C		
Nozzle Temperature	280 to 310	°C		
Processing (Melt) Temp	285 to 305	°C		
Mold Temperature	65 to 95	°C		

Notes

Typical properties: these are not to be construed as specifications.

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