

## Ascend Performance Materials Vydyn<sup>®</sup> R220/R228 Nylon 66, 40% Mineral Reinforced, Conditioned (2.5% Moisture)

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66 , 40% Mineral Filled

### Material Notes:

Vydyn<sup>®</sup> R220 is a 40% mineral reinforced Nylon 66 resin formulated for improved impact strength. Also available in black as R228. It is an injection molding grade formulated to retain the inherent processing advantages of unreinforced Nylon 66 while enhancing rigidity, strength, and heat resistance. Vydyn R220/R228 maintains the chemical resistance typical of nylon to a wide variety of chemicals, gasoline, oils, greases, and solvents. Vydyn R220/R228 resins utilize a unique mineral reinforced nylon system developed by Solutia to satisfy the market need for a high-rigidity thermoplastic as an alternative to certain metals. This mineral system provides two key features: (1) isotropic behavior — property development in molded parts is usually independent of flow direction. (2) a reduction in the tendency to develop sink marks in heavy cross sections such as molded-in bosses and ribs. While not sink free, parts made from Vydyn R220/R228 can often permit boss and rib design or wall cross section changes that would not be tolerable in other unreinforced thermoplastic materials. Thus Vydyn R220/R228 resins offer more uniform molded part strength and performance as well as wider latitude in part design. Vydyn R220/R228 are heat stabilized and designed to provide increased ductility and reduced melt viscosity vs. unreinforced materials. This ductility improvement results in tougher, more impact-resistant molded parts. The reduction in melt viscosity enhances overall ease of injection molding, resulting in minor reductions in tensile strength, modulus, and heat distortion temperature. Parts from Vydyn R220/R228 have successfully withstood paint bake oven cycles without significant loss of either dimensional stability or part properties.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Ascend-Performance-Materials-Vydyn-R220R228-Nylon-66-40-Mineral-Reinforced-Conditioned-25-Moisture.php](http://www.lookpolymers.com/polymer_Ascend-Performance-Materials-Vydyn-R220R228-Nylon-66-40-Mineral-Reinforced-Conditioned-25-Moisture.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.48 g/cc	1.48 g/cc	ISO 1183
Water Absorption	1.1 % @Time 86400 sec	1.1 % @Time 24.0 hour	ISO 62
Moisture Absorption at Equilibrium	1.6 %	1.6 %	50% RH; ISO 62
Linear Mold Shrinkage	0.010 cm/cm @Thickness 2.00 mm	0.010 in/in @Thickness 0.0787 in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.011 cm/cm @Thickness 2.00 mm	0.011 in/in @Thickness 0.0787 in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	73.0 MPa	10600 psi	ISO 527
Elongation at Break	30 %	30 %	ISO 527
Elongation at Yield	16 %	16 %	ISO 527

<b>Tensile Modulus Mechanical Properties</b>	<b>2.60 GPa Metric</b>	<b>377 ksi English</b>	<b>ISO 527 Comments</b>
Flexural Strength	50.0 MPa	7250 psi	ISO 178
Flexural Modulus	2.30 GPa	334 ksi	ISO 178

<b>Thermal Properties</b>	<b>Metric</b>	<b>English</b>	<b>Comments</b>
Melting Point	258 °C	496 °F	ISO 3146

<b>Processing Properties</b>	<b>Metric</b>	<b>English</b>	<b>Comments</b>
Processing Temperature	280 - 310 °C	536 - 590 °F	
Melt Temperature	285 - 305 °C	545 - 581 °F	
Mold Temperature	65.0 - 95.0 °C	149 - 203 °F	
Injection Pressure	55.0 - 140 MPa	7980 - 20300 psi	
Hold Pressure	55.0 - 140 MPa	7980 - 20300 psi	
Back Pressure	0.200 - 1.00 MPa	29.0 - 145 psi	
Clamp Pressure	29.43 - 68.67 MPa	4268 - 9960 psi	
Cushion	0.300 - 0.640 cm	0.118 - 0.252 in	
Screw Speed	40 - 120 rpm	40 - 120 rpm	

## Contact Songhan Plastic Technology Co.,Ltd.

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