

Vydyne® R550HR BK0777

polyamide 66



Vydyne R550HR BK0777 is a 50% glass-filled, heat-stabilized PA66 based resin designed for injection molding applications. It was specifically developed to withstand long term exposure to coolants at temperatures up to 135°C. R550HR BK0777 maintains the excellent resistance typical of PA66 in chemicals, machine and motor oils, solvents, and gasoline.

General

Regional Availability	• North America	• Europe	• Asia Pacific
Additive	• Heat Stabilizer	• Lubricant	
Features	• Chemical Resistant • Gasoline Resistant • Lubricated • Solvent Resistant	• Corrosion Resistant • High Flow • Oil Resistant	• Fatigue Resistant • Laser Markable • Organic Heat Stabilized
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical

	dry	cond.	Unit	Test Standard
Density	1.58	-	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 23°C, 2.00 mm	1.1	*	%	
Flow : 23°C, 2.00 mm	0.5	*	%	
Water Absorption, 23°C, 24 hr	0.72	*	%	ISO 62

Mechanical

	dry	cond.	Unit	Test Standard
Tensile Modulus (23°C)	15700	14700	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	237	180	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	3.4	4.5	%	ISO 527-2
Flexural Modulus (23°C)	15600	12300	MPa	ISO 178
Flexural Strength (23°C)	361	252	MPa	ISO 178

Impact

	dry	cond.	Unit	Test Standard
Charpy Notched Impact Strength				ISO 179/1eA
+23°C	18	20	kJ/m ²	
-30°C	15	17	kJ/m ²	
-40°C	15	14	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
+23°C	100	110	kJ/m ²	
-30°C	100	93	kJ/m ²	
-40°C	100	95	kJ/m ²	

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Notched Izod Impact Strength				ISO 180/1A
+23°C	16	18	kJ/m²	
-30°C	15	16	kJ/m²	
-40°C	15	15	kJ/m²	

Thermal	dry	cond.	Unit	Test Standard
Heat Deflection Temperature				ISO 75-2/A
1.80 MPa, Unannealed	254	251	°C	
0.45 MPa, Unannealed	261	259	°C	
Melting Temperature	260	*	°C	ISO 11357-3

Electrical	dry	cond.	Unit	Test Standard
Dielectric Strength (1.00 mm)	31	-	kV/mm	IEC 60243

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

