

Vydyne® R550

polyamide 66



Vydyne R550 is a general purpose, 50% glass-filled, high viscosity PA66 based resin designed for injection molding applications. R550 offers standard flow with a natural surface finish and 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	• Lubricant		
Features	• Good Flow • High Strength	• Good Mold Release • Lubricated	• High Rigidity
Agency Rating	• ASTM, D6779 PA011G50 • EU, 2023/2006	• EC, 1935/2004 • FDA, 21 CFR 177.1500	• EU, 10/2011 • SAE, J1639 PA1116
UL File Number	• E70062		
Appearance	• Natural Color		
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	0.8	*	%	
Flow : 23°C, 2.00 mm	0.3	*	%	
Water Absorption				ISO 62
23°C, 24 hr	0.5	*	%	
Equilibrium, 23°C, 50% RH	1.2	*	%	

Mechanical

	dry	cond.	Unit	Test Standard
Tensile Modulus (23°C)	16800	12600	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	240	180	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.5	3.5	%	ISO 527-2
Flexural Modulus (23°C)	16000	11200	MPa	ISO 178
Flexural Strength (23°C)	350	270	MPa	ISO 178
Poisson's Ratio (23°C)	0.4		-	ISO 527-2

Impact

	dry	cond.	Unit	Test Standard
Charpy Notched Impact Strength				ISO 179/1eA
+23°C	15	21	kJ/m ²	
-30°C	14	15	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU

Vydyne® R550

polyamide 66



+23°C	95	110	kJ/m²
-30°C	91	95	kJ/m²
Notched Izod Impact Strength			ISO 180/1A
+23°C	17	21	kJ/m²
-30°C	16	18	kJ/m²

Thermal	dry	cond.	Unit	Test Standard
Heat Deflection Temperature				ISO 75-2/A
1.80 MPa, Unannealed	255	-	°C	
0.45 MPa, Unannealed	260	-	°C	
Melting Temperature	260	*	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	12	*	E-6/K	
Transverse : 23 to 55°C, 2.00 mm	100	*	E-6/K	
RTI Elec				UL 746
0.750 mm	125		°C	
1.50 mm	125		°C	
3.00 mm	125		°C	
RTI Imp				UL 746
0.750 mm	110		°C	
1.50mm	110		°C	
3.00 mm	110		°C	
RTI Str				UL 746
0.750 mm	130		°C	
1.50 mm	130		°C	
3.00 mm	130		°C	

Electrical	dry	cond.	Unit	Test Standard
Volume Resistivity (1.00 mm)	1E11	-	Ohm*m	IEC 60093
Dielectric Strength (1.00 mm)	22	-	kV/mm	IEC 60243
Arc Resistance (3.00 mm)	5		-	ASTM D 495
Comparative Tracking Index (3.00 mm)	600		V	IEC 60112
High Amp Arc Ignition (HAI)				UL 746
0.750 mm	PLC 0		-	
1.50 mm	PLC 0		-	
3.00 mm	PLC 0		-	
High Voltage Arc Tracking Rate (HVTR), 3.00 mm	PLC 1		-	UL 746
Hot-wire Ignition (HWI)				UL 746
0.750 mm	PLC 4		-	

Vydyne® R550

polyamide 66



1.50 mm

PLC 4

-

3.00 mm

PLC 4

-

Flammability	Value	Test Standard
Flammability		UL 94
0.750 mm	HB	
1.50 mm	HB	
3.00 mm	HB	

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

