

Vydyne® R413H BK07

polyamide 66



Vydyne R413H BK07 is general-purpose, heat-stabilized, impact-modified, 15% glass-fiber reinforced PA66 resin. Available in black, It is specifically designed to maximize toughness, while retaining physical properties. This product is also lubricated for improved flow and offers superior surface appearance.

General

Regional Availability	• North America	• Europe	• Asia Pacific
Additive	• Heat Stabilizer	• Lubricant	
Features	• Chemical Resistant • Good Dimensional Stability • Good Mold Release • High Strength • Oil Resistant	• Creep Resistant • Good Flow • Grease Resistant • High Tensile Strength • Solvent Resistant	• Gasoline Resistant • Good Impact Strength • High Rigidity • Lubricated
Agency Rating	• ASTM, D4066 PA016G15	• ASTM, D6779 PA016G15	
Automotive Specifications	• Delphi M2279V	• Stellantis MS-DB-41 CPN 3152	• VOLKSWAGEN VW50133 (compliance)
UL File Number	• E70062		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical

	dry	cond.	Unit	Test Standard
Density	1.21	-	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	0.7	*	%	
Water Absorption				ISO 62
23°C, 24 hr	1	*	%	
Equilibrium, 23°C, 50% RH	1.9	*	%	

Mechanical

	dry	cond.	Unit	Test Standard
Tensile Modulus (23°C)	5500	4100	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	110	80	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	5	13	%	ISO 527-2
Flexural Modulus (23°C)	4800	2800	MPa	ISO 178
Flexural Strength (23°C)	140	73	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	12	18	kJ/m²	
-30°C	6	10	kJ/m²	
-40°C	5	5	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179/1eU
+23°C	80	76	kJ/m²	
-30°C	75	70	kJ/m²	
Notched Izod Impact Strength				ISO 180/1A
+23°C	12	21	kJ/m²	
-30°C	10	10	kJ/m²	
-40°C	9	9	kJ/m²	
Thermal	dry	cond.	Unit	Test Standard
Heat Deflection Temperature				ISO 75-2/A
1.80 MPa, Unannealed	235	-	°C	
0.45 MPa, Unannealed	258	-	°C	
Melting Temperature	260	*	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	30	*	E-6/K	
Transverse : 23 to 55°C, 2.00 mm	110	*	E-6/K	
RTI Elec				UL 746
0.400 mm	120		°C	
0.750 mm	130		°C	
1.50 mm	130		°C	
3.00 mm	130		°C	
RTI Imp				UL 746
0.400 mm	85		°C	
0.750 mm	85		°C	
1.50mm	85		°C	
3.00 mm	85		°C	
RTI Str				UL 746
0.400 mm	125		°C	
0.750 mm	125		°C	
1.50 mm	125		°C	
3.00 mm	125		°C	

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Electrical	dry	cond.	Unit	Test Standard
Volume Resistivity (1.00 mm)	1E9	-	Ohm*m	IEC 60093
Dielectric Strength (1.00 mm)	3	-	kV/mm	IEC 60243
Arc Resistance (3.00 mm)	6	-	-	ASTM D 495
Comparative Tracking Index (3.00 mm)	400 - 599	-	V	IEC 60112
High Amp Arc Ignition (HAI)				UL 746
0.400 mm	PLC 1	-	-	
0.750 mm	PLC 1	-	-	
1.50 mm	PLC 1	-	-	
3.00 mm	PLC 1	-	-	
High Voltage Arc Tracking Rate (HVTR), 3.00 mm	PLC 3	-	-	UL 746
Hot-wire Ignition (HWI)				UL 746
0.400 mm	PLC 4	-	-	
0.750 mm	PLC 4	-	-	
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

