

Vydyne® R435H NT0774

polyamide 66



Vydyne R435H NT0774, is designed to reinforce downgauged steel and aluminum used in vehicle body-in-white (BIW) structures, helping reduce weight without sacrificing safety or comfort.

R435H NT0774 has improved energy absorption over traditional glass-filled PA66, helping reduce noise, vibration and harshness (NVH) and absorbing impact energy from crashes. Using the new grade in the BIW structure reinforces sheet metal, helping manufacturers shave substantial weight and improve efficiency. Trends in lightweight and NVH are becoming even more paramount with the growth of Electric Vehicles. R435H NT0774 has excellent properties to support applications where this will be of prime importance such as battery frames and housings.

General

Regional Availability	• North America	• Europe	• Asia Pacific
Additive	• Heat Stabilizer	• Lubricant	
Features	• Balanced Stiffness/Toughness	• Chemical Resistant	• Gasoline Resistant
	• Good Dimensional Stability	• Good Heat Resistance	• Good Rigidity
	• Good Tensile Strength	• Good Toughness	• Lubricated
	• Oil Resistant	• Solvent Resistant	
Agency Rating	• ASTM, D6779	• ASTM, D4066	
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical

	dry	cond.	Unit	Test Standard
Density	1.40	-	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	0.3	*	%	
Water Absorption				ISO 62
23°C, 24 hr	1	*	%	
Equilibrium, 23°C, 50% RH	1.4	*	%	

Mechanical

	dry	cond.	Unit	Test Standard
Tensile Modulus (23°C)	11200	8400	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	185	135	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	3.5	4.5	%	ISO 527-2
Flexural Modulus (23°C)	10100	7000	MPa	ISO 178
Flexural Strength (23°C)	267	163	MPa	ISO 178

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Impact	dry	cond.	Unit	Test Standard
Charpy Notched Impact Strength				ISO 179/1eA
+23°C	19	24	kJ/m²	
-30°C	15	16	kJ/m²	
-40°C	14	14	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179/1eU
+23°C	100	110	kJ/m²	
-30°C	110	100	kJ/m²	
-40°C	110	100	kJ/m²	
Notched Izod Impact Strength				ISO 180/1A
+23°C	18	23	kJ/m²	
-30°C	16	17	kJ/m²	
-40°C	15	16	kJ/m²	

Thermal	dry	cond.	Unit	Test Standard
Heat Deflection Temperature				ISO 75-2/A
1.80 MPa, Unannealed	250	247	°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)	41	36	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

