

Vydyne® 63A

Ascend Performance Materials Operations LLC - Polyamide 66

General Information
Product Description

Vydyne 63A is a medium-viscosity resin used for injection-molding and extrusion compounding. It is desirable to include this neat resin in a formulation in which the melt strength of the final product is critical for the application. Vydyne 63A exhibits good initial color and it has a moisture level below 0.1%. This product offers high strength, rigidity and toughness over a broad range of demanding applications. Resistance of Vydyne 63A to heat, oil and wear is typical of PA66 neat resins.

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Features	• Chemical Resistant	• Good Color Stability	• Oil Resistant
	• Gasoline Resistant	• High Melt Strength	• Solvent Resistant
	• General Purpose	• Medium Viscosity	
Agency Ratings	• ASTM D4066 PA0112	• EC 1935/2004	• EU 2023/2006
	• ASTM D6779 PA0112	• EU 10/2011	• FDA 21 CFR 177.1500
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	
Resin ID	• PA66		

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.14	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	1.9	--	%	
Flow : 73°F, 0.0787 in	1.9	--	%	
Water Absorption (Saturation, 73°F)	8.5	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	2.5	--	%	ISO 62
Relative Viscosity				
₂	75.0 to 90.0	--		ASTM D789
₃	183 to 200	--		ISO 307
Moisture Content	0.10	--	%	ASTM D6869
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	464000	247000	psi	ISO 527-1
Tensile Stress (Yield, 73°F)	12300	7980	psi	ISO 527-2
Tensile Stress (Break, 73°F)	7980	9430	psi	ISO 527-2
Tensile Strain (Yield, 73°F)	5.0	20	%	ISO 527-2
Tensile Strain (Break, 73°F)	25	200	%	ISO 527-2
Flexural Modulus (73°F)	363000	102000	psi	ISO 178
Flexural Stress (73°F)	10200	2900	psi	ISO 178
Poisson's Ratio (73°F)	0.40	--		ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	2.4	4.3	ft·lb/in ²	
73°F	2.9	12	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F	No Break	No Break		
73°F	No Break	No Break		
Notched Izod Impact Strength				ISO 180/1A
-22°F	2.4	4.3	ft·lb/in ²	



73°F	2.9	12	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	374	--	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	154	--	°F	ISO 75-2/A
Melting Temperature	500	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F, 0.0787 in)	5.6E-5	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F, 0.0787 in)	5.6E-5	--	in/in/°F	ISO 11359-2
Optical	Dry	Conditioned	Unit	Test Method
Yellowness Index	2.0	--	YI	ASTM D1925

Processing Information

Extrusion	Dry	Unit
Cylinder Zone 1 Temp.	482 to 563	°F
Cylinder Zone 2 Temp.	482 to 563	°F
Cylinder Zone 3 Temp.	482 to 563	°F
Cylinder Zone 4 Temp.	482 to 563	°F
Cylinder Zone 5 Temp.	482 to 563	°F
Melt Temperature	518 to 563	°F
Die Temperature	518 to 563	°F

Notes

¹ Typical properties: these are not to be construed as specifications.

² Formic Acid

³ Sulphuric Acid

