

Vydyne® 63A

Polyamide 66

Ascend Performance Materials Operations LLC

Message:

Vydyne 63A is a medium-viscosity PA66 resin suitable for injection-molding, extrusion and compounding applications. It is available in natural color only. Vydyne 63A resin offers high strength, rigidity and toughness over a broad range of demanding applications and good fluid resistance to a wide variety of chemicals, solvents and oils.

Typical Applications/End Uses:

Typical uses include packaging films, monofilaments, bristles, rods, tubing and sheet.

General Information				
Features	Rigidity, high			
	High strength			
	Solvent resistance			
	Good melt strength			
	Good chemical resistance			
	Oil resistance			
	Good toughness			
	General			
	Medium viscosity			
Uses	Bar			
	Films			
	monofilament			
	Industrial application			
	Pipe fittings			
	cast film			
	Sheet			
	Food packaging			
Agency Ratings	ASTM D 4066 PA0112			
	ASTM D 6779 PA0112			
	FDA 21 CFR 177.1500			
RoHS Compliance	RoHS compliance			
Appearance	Natural color			
Forms	Particle			
Processing Method	Extrusion			
	Injection molding			
Physical	Dry	Conditioned	Unit	Test Method

Density	1.14	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Vertical flow direction: 23°C, 2.00mm	1.9	--	%	ISO 294-4
Flow direction: 23°C, 2.00mm	1.9	--	%	ISO 294-4
Water Absorption				ISO 62
Saturated, 23°C	8.5	--	%	ISO 62
Equilibrium, 23°C, 50% RH	2.5	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	3200	1700	MPa	ISO 527-2
Tensile Stress				ISO 527-2
Yield, 23°C	85.0	55.0	MPa	ISO 527-2
Fracture, 23°C	55.0	65.0	MPa	ISO 527-2
Tensile Strain (Yield, 23°C)	5.0	20	%	ISO 527-2
Nominal Tensile Strain at Break (23°C)	> 25	> 200	%	ISO 527-2
Flexural Modulus (23°C)	2500	700	MPa	ISO 178
Flexural Stress (23°C)	70.0	20.0	MPa	ISO 178
Poisson's Ratio	0.40	--		ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	5.0	9.0	kJ/m ²	ISO 179/1eA
23°C	6.0	25	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	No Break	No Break		ISO 179/1eU
23°C	No Break	No Break		ISO 179/1eU
Notched Izod Impact				ISO 180
-30°C	5.0	9.0	kJ/m ²	ISO 180
23°C	6.0	25	kJ/m ²	ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	190	--	°C	ISO 75-2/B
1.8 MPa, not annealed	68.0	--	°C	ISO 75-2/A
Melting Temperature	260	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 55°C, 2.00mm	1.0E-4	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C, 2.00mm	1.0E-4	--	cm/cm/°C	ISO 11359-2

Extrusion	Dry	Unit
Cylinder Zone 1 Temp.	250 - 295	°C
Cylinder Zone 2 Temp.	250 - 295	°C
Cylinder Zone 3 Temp.	250 - 295	°C
Cylinder Zone 4 Temp.	250 - 295	°C
Cylinder Zone 5 Temp.	250 - 295	°C
Melt Temperature	270 - 295	°C
Die Temperature	270 - 295	°C
Extrusion instructions		

Recommended Extrusion Conditions:Melt Point: 260°C Melt Pressure: 3 to 17 MPa Blow Film Bath Temperature: 20°C to 80°C Chill Roll Temperature (Cast Film): 20°C to 80°C Screw Design: General Purpose or Barrier

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

