Vydyne® 75HB NT0679

Monday, November 4, 2019

Ascend Performance Materials Operations LLC - Polyamide 66/6 Copolymer

General Information

Product Description

Vydyne 75HB NT0679 is a PA66-based copolymer that features high melt strength with ideal shear thinning behavior, high tensile strength, ductility, and improved clarity, making it ideal for blown and cast-film applications. Having a melt temperature between PA6 and PA66, it is a preferred material of choice compared to physical blends of PA6 and PA66 due to the ability to process at lower temperatures and produce a homogenous film, resulting in uniform melting behavior, high gloss and clarity. Further, 75HB also allows for improved process flexibility due to its slower crystallization rate versus PA66 homopolymers.

General			
Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Features	• Chemical Resistant • Good Toughness	• Heat Stabilized • High Melt Stability	• High Rigidity • High Strength
Uses	• Industrial Applications • Monofilaments • Multilayer Film	• Profiles • Rods • Sheet	• Tubing • Vacuum Bagging Film
Agency Ratings	• EC 1935/2004 • EU 10/2011	• EU 2023/2006 • FDA 21 CFR 177.1500	
RoHS Compliance	• RoHS Compliant		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Blown Film • Cast Film	• Extrusion • Profile Extrusion	

ASTM & ISO Properties [1]

Physical	Dry	Conditioned	Unit	Test Method
Density	1.14	--	g/cm³	ISO 1183
Bulk Density	674	--	g/l	ASTM D1895
Moisture Content	0.10	--	%	ASTM D6869
Relative Viscosity				
(Formic Acid)	165 to 195	--		ASTM D789
(Sulphuric Acid)	4.00 to 4.20	--		ISO 307
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Stress				ISO 527-2
Yield, Injection Molded	11300	--	psi	
Tensile Strain				ISO 527-2
Break, Injection Molded	170	--	%	
Flexural Stress				ISO 178
Injection Molded	12200	--	psi	
Films	**Dry**	**Conditioned**	**Unit**	**Test Method**
Secant Modulus - MD				ASTM D882
1.5 mil, Cast Film	--	87200	psi	
Secant Modulus - TD				ASTM D882
1.5 mil, Cast Film	--	80900	psi	
Tensile Strength - MD				ASTM D882
Yield, 1.5 mil, Cast Film	--	4500	psi	

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Films	Dry	Conditioned	Unit	Test Method
Tensile Strength - TD				ASTM D882
Yield, 1.5 mil, Cast Film	--	4500	psi	
Tensile Strength - MD				ASTM D882
Break, 1.5 mil, Cast Film	--	17500	psi	
Tensile Strength - TD				ASTM D882
Break, 1.5 mil, Cast Film	--	14600	psi	
Tensile Elongation - MD				ASTM D882
Yield, 1.5 mil, Cast Film	--	6.5	%	
Tensile Elongation - TD				ASTM D882
Yield, 1.5 mil, Cast Film	--	6.4	%	
Tensile Elongation - MD				ASTM D882
Break, 1.5 mil, Cast Film	--	390	%	
Tensile Elongation - TD				ASTM D882
Break, 1.5 mil, Cast Film	--	480	%	
Dart Drop Impact				ASTM D1709A
1.5 mil, Cast Film	--	> 2000	g	
Elmendorf Tear Strength - MD				ASTM D1922
1.5 mil, Cast Film	--	51	g	
Elmendorf Tear Strength - TD				ASTM D1922
1.5 mil, Cast Film	--	110	g	
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Notched Izod Impact Strength				ISO 180
73°F, Injection Molded	3.3	--	ft·lb/in²	
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Melting Temperature	471	--	°F	ISO 11357-3

Processing Information

Extrusion	Dry	Unit
Drying Temperature	158 to 176	°F
Drying Time	0.0 to 4.0	hr

Extrusion Notes

Recommended Injection Conditions:

Melt Point: 244°C
Cylinder Temperature: 265°C to 285°C
Die Temperature: 270°C to 295°C
Melt Pressure: 3 to 17 MPa
Blow Film Air Temperature: 20°C to 60°C
Chill Roll Temperature (Cast Film): 20°C to 40°C (clear) 80°C to 100°C (High Stable)

Recommended Process Moisture: 0.03 to 0.08%
Screw Design: General Purpose or Barrier

Notes

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