

Zytel® HTN 51G35HSL BK083

HIGH PERFORMANCE POLYAMIDE RESIN

DuPont Mobility & Materials

PROSPECTOR®

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Technical Data

Product Description

35% Glass Reinforced, Hydrolysis Resistant, PPA, High Performance Polyamide

General

Material Status	• Commercial: Active
UL Yellow Card ¹	• E41938-234558
Search for UL Yellow Card	• DuPont Mobility & Materials
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Filler / Reinforcement	• Glass Fiber, 35% Filler by Weight
RoHS Compliance	• Contact Manufacturer
Multi-Point Data	• Coefficient of Thermal Expansion vs. Temperature (ISO 11403-1) • Isothermal Stress vs. Strain (ISO 11403-1) • Secant Modulus vs. Strain (ISO 11403-1) • Shear Stress vs. Shear Rate (ISO 11403-1) • Viscosity vs. Shear Rate (ISO 11403-2)
Part Marking Code (ISO 11469)	• >PA6T/XT-GF35<
Part Marking Code (SAE J1344)	• >PPA-GF35<
Resin ID (ISO 1043)	• PA6T/XT-GF35
ISO Designation	• ISO 16396-PA6T/XT,GF35,M1CGHR,S10-120

Physical	Dry	Conditioned	Unit	Test Method
Density	1.47	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.60	--	%	
Flow	0.20	--	%	
Water Absorption				ISO 62
Saturation, 23°C, 2.00 mm	4.0	--	%	
Equilibrium, 23°C, 2.00 mm, 50% RH	1.6	--	%	
Viscosity Number (Reduced Viscosity)	100.0	--	ml/g	ISO 1628
Viscosity Number	100	--	cm ³ /g	ISO 307

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	12000	11500	MPa	ISO 527-1
Tensile Stress (Break)	230	210	MPa	ISO 527-2
Tensile Strain (Break)	2.4	2.3	%	ISO 527-2
Flexural Modulus	12600	--	MPa	ISO 178
Flexural Stress	323	--	MPa	ISO 178
Poisson's Ratio	0.33	0.33		

Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-40°C	9.0	--	kJ/m ²	
-30°C	10	9.0	kJ/m ²	
23°C	10	--	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	70	40	kJ/m ²	
23°C	70	--	kJ/m ²	
Notched Izod Impact Strength				ISO 180/1A
-30°C	8.0	--	kJ/m ²	
23°C	10	--	kJ/m ²	
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	67	--	kJ/m ²	
23°C	65	--	kJ/m ²	



Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
0.45 MPa, Unannealed	284	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	264	--	°C	ISO 75-2/A
Melting Temperature ³	300	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow	1.9E-5	--	cm/cm/°C	
Flow : -40 to 23°C	1.8E-5	--	cm/cm/°C	
Flow : 55 to 160°C	1.8E-5	--	cm/cm/°C	
Transverse	6.0E-5	--	cm/cm/°C	
Transverse : -40 to 23°C	5.1E-5	--	cm/cm/°C	
Transverse : 55 to 160°C	7.5E-5	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity	> 1.0E+13	--	ohms·m	IEC 62631-3-1
Relative Permittivity				IEC 62631-2-1
1 MHz	3.80	--		
100 Hz	4.00	--		
Dissipation Factor				IEC 62631-2-1
100 Hz	9.0E-3	--		
1 MHz	0.017	--		
Comparative Tracking Index	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate ⁴ (1.00 mm)	21	--	mm/min	ISO 3795
Flame Rating				UL 94
0.9 mm	HB	--		IEC 60695-11-10,
1.5 mm	HB	--		-20
Oxygen Index	26	--	%	ISO 4589-2
FMVSS Flammability	B	--		FMVSS 302
Additional Information	Dry	Conditioned	Unit	Test Method
Odor	4.00	--		VDA 270
Injection	Dry Unit			
Drying Temperature	100 °C			
Drying Time - Desiccant Dryer	6.0 to 8.0 hr			
Suggested Max Moisture	< 0.10 %			
Processing (Melt) Temp	320 to 330 °C			
Melt Temperature, Optimum	325 °C			
Mold Temperature	140 to 180 °C			
Mold Temperature, Optimum	150 °C			
Drying Recommended	yes			

Notes

¹ A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

² Typical properties: these are not to be construed as specifications.

³ First Heat

⁴ FMVSS 302



Where to Buy

Supplier

DuPont Mobility & Materials
Wilmington, Wilmington USA
Telephone: 302-999-4592
Web: <http://plastics.dupont.com/>

Distributor

CCC Plastics
Telephone: 800-461-1638
Web: <https://www.ccc-group.com/>
Availability: Canada

Distrupol Ltd

Distrupol Ltd is a Pan European distribution company. Contact Distrupol Ltd for availability of individual products by country.
Telephone: 08452003040
Web: <http://www.distrupol.com/>
Availability: Denmark, Finland, Ireland, Norway, Sweden, United Kingdom

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