Zytel® HTN 51G45HSL NC010

HIGH PERFORMANCE POLYAMIDE RESIN

DuPont Performance Polymers

Message:

45% Glass Reinforced, PPA, High Performance Polyamide

General Information		
UL YellowCard	E41938-234559	E41938-101495695
Filler / Reinforcement	Glass Fiber,45% Filler by Weight	
Additive	Heat Stabilizer Lubricant Mold Release	
Features	Heat Stabilized Lubricated	
Agency Ratings	UL Unspecified Rating	
Forms	Pellets	
Processing Method	Injection Molding	
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1)	
Part Marking Code (ISO 11469)	>PA6T/XT-GF45<	
Part Marking Code (SAE J1344)	>PPA-GF45<	

Physical	Dry	Conditioned	Unit	Test Method
Density	1.57	--	g/cm³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.60	--	%	
Flow	0.20	--	%	
Water Absorption				ISO 62
23°C, 24 hr, 2.00 mm	3.6	--	%	
Equilibrium, 23°C, 2.00 mm, 50% RH	1.2	--	%	

Hardness	Dry	Conditioned	Unit	Test Method
Rockwell Hardness				ISO 2039-2
M-Scale	108	--		
R-Scale	124	--		

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	15000	15000	MPa	ISO 527-2
Tensile Stress (Break)	240	230	MPa	ISO 527-2
Tensile Strain (Break)	2.4	2.1	%	ISO 527-2
Tensile Creep Modulus				ISO 899-1

1 hr	--	14000	MPa	
1000 hr	--	12000	MPa	
Flexural Modulus	13200	13200	MPa	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179/1eA
-40°C	13	--	kJ/m²	
-30°C	12	--	kJ/m²	
23°C	12	11	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	85	--	kJ/m²	
23°C	90	75	kJ/m²	
Notched Izod Impact Strength				ISO 180/1A
-40°C	13	--	kJ/m²	
23°C	12	12	kJ/m²	
Unnotched Izod Impact Strength (23°C)	87	--	kJ/m²	ISO 180/1U
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Heat Deflection Temperature				
0.45 MPa, Unannealed	286	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	265	--	°C	ISO 75-2/A
Melting Temperature [1]	300	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow	1.5E-5	--	cm/cm/°C	
Flow : -40 to 23°C	1.5E-5	--	cm/cm/°C	
Flow : 55 to 160°C	1.3E-5	--	cm/cm/°C	
Transverse	5.4E-5	--	cm/cm/°C	
Transverse : -40 to 23°C	5.0E-5	--	cm/cm/°C	
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Surface Resistivity	--	1.0E+14	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	1.0E+15	ohms·cm	IEC 60093
Electric Strength	35	34	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
100 Hz	4.20	--		
1 MHz	3.90	--		
Dissipation Factor				IEC 60250
100 Hz	9.0E-3	--		
1 MHz	0.015	--		
Comparative Tracking Index	600	600	V	IEC 60112
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**

Flammability Classification				IEC 60695-11-10, -20
0.850 mm	HB	--		
1.50 mm	HB	--		
Oxygen Index	24	--	%	ISO 4589-2

Fill Analysis	Dry	Conditioned	Unit
Specific Heat Capacity of Melt	1610	--	J/kg/°C
Thermal Conductivity of Melt	0.28	--	W/m/K

NOTE	
1.	First Heat

Recommended distributors for this material

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