Zytel® 101F NC010

NYLON RESIN

DuPont Performance Polymers

Message:

Unreinforced Polyamide 66

General Information				
UL YellowCard	E41938-100726136	E41938-234369		
Additive	Mold Release			
Agency Ratings	UL Unspecified Rating			
Forms	Pellets			
Processing Method	Injection Molding			
Multi-Point Data	Tensile Modulus vs. Temperature, Dynamic (ISO 11403-1)			
Part Marking Code (ISO 11469)	>PA66<			
Resin ID (ISO 1043)	PA66			
Physical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Density	1.14	--	g/cm³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	1.4	--	%	
Across Flow : 80°C, 48 hr	0.10	--	%	
Flow	1.4	--	%	
Flow : 80°C, 48 hr	0.20	--	%	
Water Absorption				ISO 62
23°C, 24 hr, 2.00 mm	8.5	--	%	
Equilibrium, 23°C, 2.00 mm, 50% RH	2.6	--	%	
Viscosity Number	140	--	cm³/g	ISO 307
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus	3100	1400	MPa	ISO 527-2
Tensile Stress (Yield)	82.0	55.0	MPa	ISO 527-2
Tensile Strain (Yield)	4.5	25	%	ISO 527-2
Nominal Tensile Strain at Break	20	> 50	%	ISO 527-2
Tensile Creep Modulus				ISO 899-1
1 hr	--	1400	MPa	
1000 hr	--	930	MPa	
Flexural Modulus	2800	1200	MPa	ISO 178
Films	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Elongation - MD (Yield)	4.5	--	%	ISO 527-3
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**

Charpy Notched Impact Strength				ISO 179/1eA
-30°C	4.5	3.0	kJ/m²	
23°C	6.0	13	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	400 kJ/m²	No Break		
23°C	No Break	No Break		
Notched Izod Impact Strength				ISO 180/1A
-40°C	5.5	--	kJ/m²	
-30°C	6.0	4.0	kJ/m²	
23°C	5.5	11	kJ/m²	
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	300	--	kJ/m²	
23°C	300 kJ/m²	No Break		
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Heat Deflection Temperature				
0.45 MPa, Unannealed	200	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	70.0	--	°C	ISO 75-2/A
Glass Transition Temperature [1]	60.0	--	°C	ISO 11357-2
Vicat Softening Temperature	240	--	°C	ISO 306/B50
Melting Temperature [2]	262	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow	1.0E-4	--	cm/cm/°C	
Transverse	1.1E-4	--	cm/cm/°C	
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Surface Resistivity	1.0E+12	--	ohms	ASTM D257
Volume Resistivity	1.0E+15	> 1.0E+15	ohms·cm	IEC 60093
Electric Strength	32	26	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
100 Hz	3.80	8.00		
1 MHz	3.60	4.60		
Dissipation Factor				IEC 60250
100 Hz	0.014	--		
1 MHz	0.018	0.10		
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Flammability Classification				IEC 60695-11-10, -20
0.710 mm	V-2	--		
1.50 mm	V-2	--		

Oxygen Index	28	--	%	ISO 4589-2
Fill Analysis	Dry	Conditioned	Unit	Test Method
Melt Density	0.970	--	g/cm^3	
Specific Heat Capacity of Melt	2790	--	J/kg/°C	
Thermal Conductivity of Melt	0.16	--	W/m/K	
Effective Thermal Diffusivity	0.0500	--	cSt	
Emission of Organic Compounds	6.50	--	μgC/g	VDA 277
Odor	3	--		VDA 270

NOTE	
1.	10°C/min
2.	10°C/min

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