

Zytel® ST801AW NC010

NYLON RESIN

DuPont Performance Polymers

Message:

Super Toughened, UV Stabilized, Polyamide 66

General Information				
UL YellowCard		E41938-234522		
Additive		demoulding		
		UV stabilizer		
Features		UV Stabilized		
RoHS Compliance		Contact manufacturer		
Forms		Particle		
Processing Method		Injection molding		
Multi-Point Data		Tensile Modulus vs. Temperature (ISO 11403-1)		
Part Marking Code (ISO 11469)		>PA66-HI		
Resin ID (ISO 1043)		PA66-HI		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.08	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Transverse flow	1.4	--	%	ISO 294-4
Flow	1.8	--	%	ISO 294-4
Water Absorption				ISO 62
23°C, 24 hr	1.2	--	%	ISO 62
Balance, 23°C, 2.00mm, 50% RH	1.9	--	%	ISO 62
Hardness	Dry	Conditioned	Unit	Test Method
Rockwell Hardness (R-Scale)	110	--		ISO 2039-2
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	1900	775	MPa	ISO 527-2
Tensile Stress (Yield)	49.0	35.5	MPa	ISO 527-2
Tensile Strain (Yield)	5.0	27	%	ISO 527-2
Flexural Modulus	1800	700	MPa	ISO 178
Films	Dry	Conditioned	Unit	Test Method
Tensile Elongation - MD (Yield)	9.5	--	%	ISO 527-3
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA

-40°C	21	--	kJ/m ²	ISO 179/1eA
-30°C	23	22	kJ/m ²	ISO 179/1eA
23°C	83	120	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-40°C	240	--	kJ/m ²	ISO 179/1eU
-30°C	No Break	--		ISO 179/1eU
23°C	No Break	--		ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-40°C	21	--	kJ/m ²	ISO 180/1A
23°C	80	--	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	No Break	--		ISO 180/1U
23°C	No Break	--		ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	155	--	°C	ISO 75-2/B
1.8 MPa, not annealed	60.0	--	°C	ISO 75-2/A
Melting Temperature ¹	262	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow	1.4E-4	--	cm/cm/°C	ISO 11359-2
Lateral	1.2E-4	--	cm/cm/°C	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	--	7.1E+12	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	2.4E+12	ohms·cm	IEC 60093
Dielectric Strength	26	26	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
100 Hz	3.40	6.00		IEC 60250
1 MHz	3.20	3.50		IEC 60250
Dissipation Factor				IEC 60250
100 Hz	5.0E-3	0.18		IEC 60250
1 MHz	0.011	0.038		IEC 60250
Comparative Tracking Index	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate ² (1.00 mm)	26	--	mm/min	ISO 3795
Flame Rating				UL 94, IEC 60695-11-10, -20
0.75 mm	HB	--		UL 94, IEC 60695-11-10, -20
1.5 mm	HB	--		UL 94, IEC 60695-11-10, -20

FMVSS Flammability	B	--	FMVSS 302
Melt Temperature, Optimum	290		°C
Mold Temperature, Optimum	80		°C
Drying Recommended	yes		
Hold Pressure Time	4.00		s/mm
Maximum Screw Tangential Speed	300		mm/sec
Fill Analysis	Dry	Conditioned	Unit
Ejection Temperature	190	--	°C
Injection	Dry	Unit	
Drying Temperature	80		°C
Drying Time - Desiccant Dryer	2.0 - 4.0		hr
Suggested Max Moisture	0.20		%
Processing (Melt) Temp	280 - 300		°C
Mold Temperature	50 - 100		°C
Holding Pressure	50.0 - 100		MPa
NOTE			
1.	10°C/min		
2.	FMVSS 302		

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