

Zytel® ST801AW BK195

NYLON RESIN
DuPont Performance Polymers

Message:
Super Toughened, UV Stabilized, Polyamide 66

General Information				
UL YellowCard	E41938-234522			
Additive	UV stabilizer			
Features	UV Stabilized			
RoHS Compliance	Contact manufacturer			
Processing Method	Injection molding			
Part Marking Code (ISO 11469)	>PA66-HI			
Resin ID (ISO 1043)	PA66-HI			
Physical	Dry	Conditioned	Unit	Test Method
Density	1.09	--	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 (23°C, 24 hr)	1.1	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	1900	1240	MPa	ISO 527-2
Tensile Stress				ISO 527-2
Yield	47.0	--	MPa	ISO 527-2
50% strain	--	41.0	MPa	ISO 527-2
Tensile Strain				
Yield	30	--	%	ISO 527-2
Fracture	--	> 50	%	ISO 527-2
Fracture, 23°C	75	--	%	ISO 527-2/50
Flexural Modulus	1800	700	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-40°C	19	--	kJ/m ²	ISO 179/1eA
23°C	79	--	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	No Break	--		ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-40°C	18	--	kJ/m ²	ISO 180/1A
23°C	80	--	kJ/m ²	ISO 180/1A

Unnotched Izod Impact Strength (23°C)	No Break	--		ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	162	--	°C	ISO 75-2/B
1.8 MPa, not annealed	62.0	--	°C	ISO 75-2/A
Melting Temperature ¹	262	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow	1.5E-4	--	cm/cm/°C	ISO 11359-2
Lateral	1.3E-4	--	cm/cm/°C	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	--	3.0E+12	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	7.4E+12	ohms·cm	IEC 60093
Dielectric Strength	25	22	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
100 Hz	3.90	6.70		IEC 60250
1 MHz	3.70	4.00		IEC 60250
Dissipation Factor				IEC 60250
100 Hz	6.0E-3	0.16		IEC 60250
1 MHz	0.012	0.044		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
Atomization-G-value (condensate)	1.0E-4	--	g	ISO 6452
Emission of Organic Compounds	38.4	--	µgC/g	VDA 277
Odor	3.00	--		VDA 270
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	Test Method
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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