Zytel®

nylon resin

Zytel® ST801 NC010A

Zytel® ST801 NC010A is a general purpose Super Tough nylon 66 resin. It offers outstanding impact resistance and high productivity.

Property	Test Method	Units	Value	
			50%RH	DAM
Mechanical				
Tensile Stress at 50% Strain	ISO 527-1/2	MPa		
50mm/min			39	
Yield Stress	ISO 527-1/2	MPa		
50mm/min			43	50
Nominal Strain at Break	ISO 527-1/2	%		
50mm/min			>50	32
Strain at Break	ISO 527-1/2	%		
50mm/min			>100	60
Yield Strain	ISO 527-1/2	%		
50mm/min			37	5,7
Tensile Modulus	ISO 527-1/2	MPa		
1mm/min			900	2000
Tensile Creep Modulus	ISO 899	MPa		
1000h			750	
1h			1200	
Notched Izod Impact	ISO 180/1A	kJ/m2		
-30C			20	20
23C			100	80
Notched Charpy Impact	ISO 179/1eA	kJ/m2		
-30C			17	18
23C			115	80
Unnotched Charpy Impact	ISO 179/1eU	kJ/m2		
-30C			NB	NB
23C			NB	NB

Properties measured at 23°C unless otherwise stated.
Please refer to the Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc.

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Property	Test Method	Units	Value	
			50%RH	DAM
Thermal				
Deflection Temperature	ISO 75-1/2	°C		
0,45MPa				132
1,80MPa				64
CLTE, Flow	ASTM E 831	E-4/C		1,2
CLTE, Transverse	ASTM E 831	E-4/C		0,9
Melting Temperature	ISO 3146C	°C		
10C/min				263
Vicat Softening Temperature	ISO 306	°C		
50N				207
Electrical				
Surface Resistivity	IEC 93	ohm	>1E15	1E15
Relative Permittivity	IEC 250			
23C, 1E2 Hz			8	3,2
1E6 Hz			3,6	2,9
Volume Resistivity	IEC 93	ohm cm	1E13	1E14
Dissipation Factor	IEC 250	E-4		
1E2 Hz			1800	80
1E6 Hz			550	140
Electric Strength	IEC 243-1	kV/mm	39	31
CTI	IEC 112	V		600
Flammability				
Flammability at 1.6mm Nominal UL94	UL94			HB
UL94 Rating at Min. Thickness	UL94			HB
UL94 Min. Thickness Tested	UL94	mm		0,8
Limited Oxygen Index	ISO 4589	%		20
Other				
Density	ISO 1183	kg/m3		1080
Hardness, Rockwell	ISO 2039/2		R89	R112
Humidity Absorption	ISO 62, Similar to	%		2,2
Water Absorption	ISO 62, Similar to	%		
Equilibrium 50%RH				6,7
Mould Shrinkage	ISO 2577	%		
Flow				1,7
Processing				
Melt Temperature Range		°C		288-293
Mould Temperature Range		°C		38-93
Drying Time, Dehumidified Dryer		h		2-4
Drying Temperature		°C		80

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