DuPont™ Zytel®

nylon resin

PRELIMINARY DATA

Zytel® ST811HS NC010

Zytel® ST811HS is an extrudable Super Tough polyamide 6 resin. Flexible, non-plasticized grade, suitable for cable and rope jacketing, hose inner cores and molded fasteners and ski binding parts.

Property	Test Method	Units	Value	
			DAM	50%RH
Identification				
Resin Identification	ISO 1043		PA6-HI	
Part Marking Code	ISO 11469		>PA6-HI<	
Mechanical				
Yield Stress	ISO 527	MPa (kpsi)	31 (4.5)	
Yield Strain	ISO 527	%	29	
Nominal Strain at Break	ISO 527	%	>50	>50
Tensile Modulus	ISO 527	MPa (kpsi)	900 (131)	400 (58)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m^2		
-30°C (-22°F)			14	13
23°C (73°F)			71	129
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m^2		
-30°C (-22°F)			NB	NB
23°C (73°F)			NB	NB

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc.
ISO Mechanical properties measured at 4.0mm, ISO Electrical properties measured at 2.0mm, and all ASTM properties measured at 3.2mm.
Test temperatures are 23°C unless otherwise stated.

The above data are preliminary and are subject to change as additional data are developed on subsequent lots.

061106/061106

Zytel® ST811HS NC010

Property	Test Method	Units	Value	
			DAM	50%RH
Thermal				
Deflection Temperature	ISO 75-1/-2	°C (°F)		
0.45MPa			170 (338)	
1.80MPa			47 (117)	
Melting Temperature	ISO 11357-1/-3	°C (°F)		
10°C/min			218 (424)	
CLTE, Parallel	ISO 11359-1/-2	E-4/C (E-4/F)		
23 - 55°C (73 - 130°F)			2 (1.11)	
CLTE, Normal	ISO 11359-1/-2	E-4/C (E-4/F)		
23 - 55°C (73 - 130°F)			1.8 (1)	
Vicat Softening Temperature	ISO 306	°C (°F)		
50N			95 (203)	
Electrical				
CTI	UL 746A	V	>600	
Flammability				
Flammability Classification	IEC 60695-11-10			
0.75mm			HB	
1.5mm			HB	
3.0mm			HB	
Flammability Classification	UL94			
0.75mm			HB	
1.5mm			HB	
3.0mm			HB	
High Amperage Arc Ignition Resistance	UL 746A	arcs		
0.75mm			200	
1.5mm			>200	
3.0mm			>200	

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc.
ISO Mechanical properties measured at 4.0mm, ISO Electrical properties measured at 2.0mm, and all ASTM properties measured at 3.2mm.
Test temperatures are 23°C unless otherwise stated.

The above data are preliminary and are subject to change as additional data are developed on subsequent lots.

061106/061106

Zytel® ST811HS NC010

Property	Test Method	Units	Value	
			DAM	50%RH
Flammability				
Hot Wire Ignition	UL 746A	s		
0.75mm			9	
1.5mm			14	
3.0mm			18	
Temperature Index				
RTI, Electrical	UL 746B	°C		
0.75mm			130	
1.5mm			130	
3.0mm			130	
RTI, Impact	UL 746B	°C		
0.75mm			65	
1.5mm			105	
3.0mm			105	
RTI, Strength	UL 746B	°C		
0.75mm			95	
1.5mm			100	
3.0mm			110	
Other				
Density	ISO 1183	kg/m^3 (g/cm^3)	1040 (1.04)	
Water Absorption	ISO 62, Similar to	%		
Equilibrium 50%RH			2.3	
Saturation, immersed			6.8	
Molding Shrinkage	ISO 294-4	%		
Parallel, 2.0mm			1.8	
Mold Shrinkage		%		
Flow, 3.2mm (0.125in)			1.8	
Transverse, 3.2mm (0.125in)			1.8	

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc.
ISO Mechanical properties measured at 4.0mm, ISO Electrical properties measured at 2.0mm, and all ASTM properties measured at 3.2mm.
Test temperatures are 23°C unless otherwise stated.

The above data are preliminary and are subject to change as additional data are developed on subsequent lots.

061106/061106

Zytel® ST811HS NC010

Property	Test Method	Units	Value	
			DAM	50%RH
Processing				
Melt Temperature Range		°C (°F)	260-280 (500-535)	
Melt Temperature Optimum		°C (°F)	270 (520)	
Mold Temperature Range		°C (°F)	50-90 (120-190)	
Mold Temperature Optimum		°C (°F)	70 (160)	
Drying Time, Dehumidified Dryer		h	2-4	
Drying Temperature		°C (°F)	80 (175)	
Processing Moisture Content		%	<0.05	

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc.
ISO Mechanical properties measured at 4.0mm, ISO Electrical properties measured at 2.0mm, and all ASTM properties measured at 3.2mm.
Test temperatures are 23°C unless otherwise stated.

The above data are preliminary and are subject to change as additional data are developed on subsequent lots.

061106/061106