

Zytel® ST801AHS BK010

NYLON RESIN
DuPont Performance Polymers

Message:
Super Toughened, Heat Stabilized, Polyamide 66

General Information				
UL YellowCard		E41938-234521		
Additive		heat stabilizer		
Features		Thermal Stability		
RoHS Compliance		Contact manufacturer		
Processing Method		Injection molding		
Multi-Point Data		Isothermal Stress vs. Strain (ISO 11403-1)		
		Secant Modulus vs. Strain (ISO 11403-1)		
Part Marking Code (ISO 11469)		>PA66-HI		
Resin ID (ISO 1043)		PA66-HI		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.09	--	g/cm³	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	1.1	--	%	ISO 62
Balance, 23°C, 2.00mm, 50% RH	2.0	--	%	ISO 62
Hardness	Dry	Conditioned	Unit	Test Method
Rockwell Hardness (R-Scale)	107	69		ISO 2039-2
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	2000	1100	MPa	ISO 527-2
Tensile Stress (Yield)	47.0	39.0	MPa	ISO 527-2
Tensile Strain (Yield)	4.0	39	%	ISO 527-2
Nominal Tensile Strain at Break	50	> 50	%	ISO 527-2
Flexural Modulus	1900	800	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	17	15	kJ/m²	ISO 179/1eA
23°C	75	110	kJ/m²	ISO 179/1eA

Charpy Unnotched Impact Strength (23°C)	No Break	--		ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-40°C	17	--	kJ/m ²	ISO 180/1A
-30°C	19	--	kJ/m ²	ISO 180/1A
23°C	70	--	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	147	--	°C	ISO 75-2/B
1.8 MPa, not annealed	61.0	--	°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
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate ² (1.00 mm)	24	--	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	13.0	--	µgC/g	VDA 277
Odor	5.00	--		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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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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