

Zytel® ST811HS BK038

NYLON RESIN
DuPont Performance Polymers

Message:
Super Toughened, Heat Stabilized, Polyamide 6

General Information				
UL YellowCard		E41938-234353		
Additive		heat stabilizer		
Features		Thermal Stability		
RoHS Compliance		Contact manufacturer		
Forms		Particle		
Processing Method		Extrusion		
		Coating		
		Injection molding		
Part Marking Code (ISO 11469)		>PA6-HI		
Resin ID (ISO 1043)		PA6-HI		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.05	--	g/cm³	ISO 1183
Molding Shrinkage				ISO 294-4
Transverse flow	1.4	--	%	ISO 294-4
Flow	0.90	--	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 2.00 mm, 50% RH)	2.3	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	900	400	MPa	ISO 527-2
Tensile Stress (Yield)	31.0	--	MPa	ISO 527-2
Tensile Strain (Yield)	29	--	%	ISO 527-2
Flexural Modulus	850	--	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-40°C	12	--	kJ/m²	ISO 179/1eA
23°C	80	--	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	No Break	--		ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-40°C	13	--	kJ/m²	ISO 180/1A
23°C	65	--	kJ/m²	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	85.0	--	°C	ISO 75-2/B
1.8 MPa, not annealed	40.0	--	°C	ISO 75-2/A
Glass Transition Temperature ¹	50.0	0.00	°C	ISO 11357-2
Melting Temperature ²	218	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow	1.3E-4	--	cm/cm/°C	ISO 11359-2
Lateral	1.4E-4	--	cm/cm/°C	ISO 11359-2
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate ³ (1.00 mm)	< 100	--	mm/min	ISO 3795
FMVSS Flammability	B	--		FMVSS 302
Melt Temperature, Optimum	270		°C	
Mold Temperature, Optimum	70		°C	
Drying Recommended	yes			
Hold Pressure Time	4.00		s/mm	
Maximum Screw Tangential Speed	300		mm/sec	
Extrusion Melt Temperature, Optimum	240		°C	
Fill Analysis	Dry	Conditioned	Unit	
Ejection Temperature	190	--	°C	
Injection	Dry	Unit		
Drying Temperature	60		°C	
Drying Time - Desiccant Dryer	2.0 - 4.0		hr	
Suggested Max Moisture	0.20		%	
Processing (Melt) Temp	260 - 280		°C	
Mold Temperature	50 - 90		°C	
Holding Pressure	50.0 - 100		MPa	
Extrusion	Dry	Unit		
Drying Temperature	60		°C	
Drying Time	4.0 - 6.0		hr	
Suggested Max Moisture	0.060		%	
Melt Temperature	235 - 250		°C	
NOTE				
1.	10°C/min			
2.	10°C/min			

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