

# DuPont™ Zytel® ST800HSL BK152

## NYLON RESIN

Product Information

**ISO 1043: PA66-HI**

Common features of Zytel® nylon resin include mechanical and physical properties such as high mechanical strength, excellent balance of stiffness and toughness, good high temperature performance, good electrical and flammability properties, good abrasion and chemical resistance. In addition, Zytel® nylon resins are available in different modified and reinforced grades to create a wide range of products with tailored properties for specific processes and end-uses. Zytel® nylon resin, including most flame retardant grades, offer the ability to be coloured.

The good melt stability of Zytel® nylon resin normally enables the recycling of properly handled production waste. If recycling is not possible, DuPont recommends, as the preferred option, incineration with energy recovery (-31kJ/g of base polymer) in appropriately equipped installations. For disposal, local regulations have to be observed.

Zytel® nylon resin typically is used in demanding applications in the automotive, furniture, domestic appliances, sporting goods and construction industry.

**Zytel® ST800HSL BK152 is a heat stabilized Super Tough black polyamide 66 resin. It offers outstanding impact resistance, high productivity and laser markability.**

General information	Value	Unit	Test Standard
Resin Identification	PA66-HI	-	ISO 1043
Part Marking Code	PA66-HI	-	ISO 11469
Rheological properties	dry / cond	Unit	Test Standard
Molding shrinkage, parallel	1.8 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	1.8 / -	%	ISO 294-4, 2577
Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	2003 / -	MPa	ISO 527-1/-2
Yield stress	51 / -	MPa	ISO 527-1/-2
Yield strain	6 / -	%	ISO 527-1/-2
Nominal strain at break	38 / -	%	ISO 527-1/-2
Charpy impact strength, 73°F	N / -	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 73°F	72 / -	kJ/m <sup>2</sup>	ISO 179/1eA
Thermal properties	dry / cond	Unit	Test Standard
Melting temperature, 18°F/min	263 / *	°C	ISO 11357-1/-3
Temp. of deflection under load, 260 psi	61 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	110 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	120 / *	E-6/K	ISO 11359-1/-2
RTI, electrical			UL 746B
30mil	130 / *	°C	
60mil	130 / *	°C	
120mil	130	°C	
RTI, impact			UL 746B
30mil	105	°C	
60mil	105 / *	°C	
120mil	105	°C	
RTI, strength			UL 746B
30mil	110	°C	
60mil	110 / *	°C	
120mil	110	°C	
Flammability	dry / cond	Unit	Test Standard
Burning Behav. at 60mil nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	IEC 60695-11-10
UL recognition	yes / *	-	UL 94
Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.75 / *	mm	IEC 60695-11-10

To find out more, visit [DuPont Performance Polymers](#) or contact nearest DuPont location.

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UL recognition	yes / *	-	UL 94
Flammability, 3.0mm	HB / *	-	IEC 60695-11-10
FMVSS Class	B	-	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<100	mm/min	ISO 3795 (FMVSS 302)
<b>Other properties</b>			
	dry / cond	Unit	Test Standard
Density	1090 / -	kg/m <sup>3</sup>	ISO 1183
<b>Injection</b>			
	dry / cond	Unit	Test Standard
Drying Recommended	yes	-	-
Drying Temperature	≥80	°C	-
Drying Time, Dehumidified Dryer	2 - 4	h	-
Processing Moisture Content	≤0.2	%	-
Melt Temperature Optimum	290	°C	-
Min. melt temperature	280	°C	-
Max. melt temperature	300	°C	-
Max. screw tangential speed	0.3 / *	m/s	-
Mold Temperature Optimum	80	°C	-
Min. mold temperature	50	°C	-
Max. mold temperature	100	°C	-
Hold pressure range	50 - 100	MPa	-
Hold pressure time	4	s/mm	-
Ejection temperature	190	°C	-
<b>Extrusion</b>			
	Value	Unit	Test Standard
Drying Temperature	≤80	°C	-
Drying Time, Dehumidified Dryer	4 - 6	h	-
Melt Temperature Optimum	285	°C	-
Melt Temperature Range	275 - 290	°C	-

### Characteristics

Processing	• Injection Molding		
Delivery form	• Pellets		
Additives	• Lubricants		
Special characteristics	• Heat stabilized or stable to heat		
Regional Availability	• North America	• South and Central America	

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc. ISO Mechanical properties measured at 160 mil (Hytrel® measured at 80 mil), IEC Electrical properties measured at 80 mil, all ASTM properties measured at 120 mil, and test temperatures are 73°F unless otherwise stated.

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