

# Nylene® 4114 HS BK ISO

## TECHNICAL DATASHEET

TDS Ref # 877 Reviewed: 9/2/2015

### DESCRIPTION

• Nylene 4114 HS BK is a heat-stabilized, impact-modified nylon 6/6 molding resin with high impact strength and increased flexibility.

PROPERTIES	TEST METHOD	UNIT	VALUE
<b>PHYSICAL PROPERTIES</b>			
Density	ISO 1183	g/cm <sup>3</sup> (lb/in <sup>3</sup> )	1.09
<b>MECHANICAL PROPERTIES</b>			
Elongation @ Break	ISO 527	(%)	50
Flexural Modulus	ISO 178	MPa	1660
Notched Izod @ 23°C	ISO 180	J/m	66
Tensile Modulus	ISO 527	MPa	1870
Tensile Strength	ISO 527	MPa	48
<b>THERMAL PROPERTIES</b>			
DTUL	ISO 75	°C (°F)	55 (131)
Melt Flow	ISO 1133	dg/min	5
Melt Point	ISO 11357	°C (°F)	256 (493)

### NOTES

• Testing conducted on dry-as-molded specimens at 73°F (22.8°C)

### PROCESSING CONSIDERATIONS: PA 6/6 GLASS REINFORCED < 15%

°F (°C)	Rear Zone	500-560 (260-293)	<b>Melt Temperature:</b> Nylene PA6/6 melts at 490 °F (254°C), actual melt temperatures of 540-600 (282-316°C) are permissible, depending on residence time and shot size.
	Center Zone	530-570 (277-299)	<b>Mold Temperature:</b> 120-200 °F (49-93°C), highly filled grades require 180-200 °F (82-93°C) to obtain the best overall surface appearance, higher temperatures will increase crystallinity.
	Front Zone	540-590 (282-310)	<b>Residence Time:</b> should not exceed 6 minutes if possible, less with higher melt temperatures.
	Nozzel	535-585 (279-307)	<b>Shot Size:</b> should be between 25-75% of barrel capacity.
	Melt Temp.	550-600 (287-316)	<b>Fill Rate:</b> fast fill rates are suggested for best surface appearance.
PRESSURE	Injection	5-15,000	<b>Regrind Level:</b> typically no more than 25% is recommended, with higher levels possible for unfilled grades depending on the end use requirements. Make certain regrind is properly dried to virgin moisture levels.
	Hold	4-12,000	<b>Drying Temperature:</b> 150-180 °F (65-182°C) (for 2-4 hours, Nylene PA6/6 should be dried to less than 0.20% moisture for optimum performance. Drying longer than 4 hours or at higher temperatures may cause oxidation of the polymer or remove essential volatiles.
	Back	0-50	

### CHARACTERISTICS

Resin Type: Nylon 6/6  
Product Characteristics:  
Impact Modified, Heat Stabilized

### INJECTION MOLDING PROCESSING

Prime Grade

### MARKETS USED

- Automotive Applications
- General Applications
- Industrial Applications

### APPLICATIONS

- Clips
- Engine Cover
- Fasteners

### DISCLAIMER

The data set forth herein has been carefully compiled by Nylene in our laboratories. Values shown are typical properties and not specifications. Since processing variables will affect properties, the reproducibility of our data in a customer's testing facility is not guaranteed. There is no warranty of any kind, either expressed or implied, applicable to the use of this information, and the user assumes all risk and liability in connection therewith.



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