

# Nylene® 5160 HS BK

## TECHNICAL DATASHEET

TDS Ref # 960 Reviewed: 10/31/2017

### DESCRIPTION

- Nylene 5160 HS BK is a 60% glass fiber-reinforced nylon 6/6 featuring high tensile strength and stiffness.

PROPERTIES	TEST METHOD	UNIT	VALUE
<b>PHYSICAL PROPERTIES</b>			
Density	ISO 1183	g/cm <sup>3</sup>	1.69
Mold Shrinkage	(Injection Molded)	in/in	.002
<b>MECHANICAL PROPERTIES</b>			
Flexural Modulus	ISO 178	MPa	18,000
Tensile Strength	ISO 527	MPa	190
<b>THERMAL PROPERTIES</b>			
DTUL @ 1800 kPa	ISO 75	°C	250
Melt Point	ISO 11357 - D 3418	°C (°F)	254 (490)

### NOTES

- Testing conducted on dry-as-molded specimens at 73°F

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

°F (°C)	Rear Zone	500-560 (260-293)	<p><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.</p> <p><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.</p> <p><b>Residence Time:</b> should not exceed 6 minutes if possible, less with higher melt temperatures.</p> <p><b>Shot Size:</b> should be between 25-75% of barrel capacity.</p> <p><b>Fill Rate:</b> fast fill rates are suggested for best surface appearance.</p> <p><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.</p> <p><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.</p>
	Center Zone	530-570 (277-299)	
	Front Zone	540-590 (282-310)	
	Nozzel	535-585 (279-307)	
	Melt Temp.	550-600 (287-316)	
PRESSURE	Injection	5-15,000	
	Hold	4-12,000	
	Back	0-50	

### CHARACTERISTICS

Resin Type: Nylon 6/6  
 Product Characteristics:  
 Glass Reinforced, Heat Stabilized, Black

### INJECTION MOLDING PROCESSING

Prime Grade

### FEATURES

- Good Chemical Resistance
- High Heat Resistance
- Very High Strength and Stiffness

### MARKETS USED

- Automotive Applications
- General Applications
- Electrical Applications
- Industrial Applications
- Tool & Appliance
- Furniture & Household

### APPLICATIONS

- Air Intake Manifolds
- Appliance Footing
- Bracket
- Coil Bobbins
- Electrical Connector
- Engine Mounts
- Housing
- Light Reflector
- Oil Fitting
- Power Equipment Housings
- Pulley

### 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.



**Headquarters and Facility:**  
 55 Haul Road, Wayne, NJ 07470  
 P: 973-694-4141 | F: 973-694-3549

**North American Sales Office:**  
 31700 Telegraph Rd. Suite 235, MI 48025  
 P: 248-377-6769 | F: 248-377-3845

**Nylene Custom Resins Facility:**  
 1421 Hwy 136 W. Henderson, KY 42420  
 P: 270-826-7641 | TF: 800-626-7050

**Nylene Canada Facility**  
 200 McNab Street, Arnprior ON, K7S 3P2  
 P: 613-623-3191 | TF: 800-267-7394

For a complete listing of our global offices, visit:  
[www.nylene.com/contactus](http://www.nylene.com/contactus)

[www.nylene.com](http://www.nylene.com) | [info@nylene.com](mailto:info@nylene.com)

Copyright ©2019, Nylene. All rights reserved. Nylene is a designated trademark of Polymeric Resources Corporation.