

# Nylene® 5230-21 HS BK

## TECHNICAL DATASHEET

TDS Ref # 876 Reviewed: 8/26/2015

### DESCRIPTION

- Nylene 5230-21 HS BK is a 20% glass bead, 10% glass fiber-reinforced, heat stabilized, injection molding resin.
- Nylene 5230-21 HS BK is suitable for applications where dimensional stability is important.
- This product uses glass fiber reinforcement to achieve improved strength and stiffness along glass beads for increased flatness and dimensional stability.

PROPERTIES	TEST METHOD	UNIT	VALUE
<b>PHYSICAL PROPERTIES</b>			
Density	ISO 1183	g/cm <sup>3</sup>	1.34
<b>MECHANICAL PROPERTIES</b>			
Charpy Notched Impact (23°C)	ISO 179/1eU	KJ/m <sup>2</sup>	5
Flexural Modulus	ISO 178	MPa	4,370
Tensile Modulus	ISO 527	MPa	3,820
Tensile Strength	ISO 527	MPa	80
<b>THERMAL PROPERTIES</b>			
DTUL @ 1800 kPa	ISO 75	°C (°F)	158 (316)
Melt Point	ISO 11357	°C (°F)	220 (428)

### NOTES

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

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

°F (°C)	Rear Zone	480-530 (249-277)
	Center Zone	500-550 (260-288)
	Front Zone	520-570 (271-299)
	Nozzel	520-570 (271-299)
	Melt Temp.	550-575 288-302
PRESSURE	Injection	8-18,000
	Hold	6-15,000
	Back	0-50

**Melt Temperature:** Nylene PA6 melts at 428°F, (220°C) actual melt temperatures of 440-560°F (227-293°C) are permissible, depending on residence time and shot size.

**Mold Temperature:** 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.

**Residence Time:** should not exceed 6 minutes if possible, less with higher melt temperatures.

**Shot Size:** should be between 25-75% of barrel capacity.

**Fill Rate:** fast fill rates are suggested for best surface appearance.

**Regrind Level:** 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.

**Drying Temperature:** 150-180°F (66-82°C) for 2-4 hours, Nylene PA6 should be dried to less than 0.20% moisture for optimum performance. Drying longer than 4 hours or at higher temperatures may cause discoloration of the polymer or adversely affect important physical properties.

### CHARACTERISTICS

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

### INJECTION MOLDING PROCESSING

Prime Grade

### MARKETS USED

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

### APPLICATIONS

- Enclosures
- Handles
- Housing
- Seat Adjuster Levers

### 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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