

# Nylene® 4214-33 HS

## TECHNICAL DATASHEET

TDS Ref # 110 Reviewed: 7/19/2013

### DESCRIPTION

- Glass fiber reinforced, impact modified, heat-stabilized nylon 6
- Useful in applications which require the stiffness of 33% glass fiber reinforcement, but also benefit from improved toughness, especially in dry or cold environments

PROPERTIES	TEST METHOD	UNIT	VALUE
<b>PHYSICAL PROPERTIES</b>			
Mold Shrinkage	n/a	in/in	0.004
Specific Gravity	D792	n/a	1.36
<b>MECHANICAL PROPERTIES</b>			
Elongation	D638	%	5
Flexural Modulus	D790	psi (MPa)	1,100,000 (7,585)
Notched Izod @ 23°C	D256	ftlb/in (J/m)	3.3 (176)
Tensile Strength	D638	psi (MPa)	20,000 (140)
<b>THERMAL PROPERTIES</b>			
DTUL @ 264 psi/1.82 MPa	D648	°F (°C)	410 (210)
Melt Point	D3418	°F (°C)	420 (215)

### NOTES

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

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

°F (°C)	Rear Zone	480-530 (249-277)	<p><b>Melt Temperature:</b> 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.</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 (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.</p>
	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	

### CHARACTERISTICS

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

### INJECTION MOLDING PROCESSING

Prime Grade

### MARKETS USED

- Automotive Applications
- General Applications
- Furniture & Household

### APPLICATIONS

- Bracket
- Door Handle
- Housing
- Seat Adjuster Levers
- Seat Pan

### 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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