

Nylene[®] 5233 HS

TECHNICAL DATASHEET

TDS Ref # 128 Reviewed: 4/24/2018

DESCRIPTION

- Glass fiber reinforced heat stabilized nylon 6 injection molding resin.
- High heat and chemical resistance inherent in nylon type resins, along with higher strength and stiffness due to glass fiber reinforcement.
- Excellent surface appearance when processed in a warm mold.

PROPERTIES	TEST METHOD	UNIT	VALUE
PHYSICAL PROPERTIES			
Mold Shrinkage	n/a	in/in	0.005 to 0.007
Specific Gravity	D792	n/a	1.37
MECHANICAL PROPERTIES			
Elongation @ Break	D638	[%]	3
Flexural Modulus	D790	psi (MPa)	1,350,000 (9,310)
Notched Izod @ 23°C	D256	ftlb/in (J/m)	2.1 (112)
Tensile Strength	D638	psi (MPa)	23,500 (162)
THERMAL PROPERTIES			
DTUL @ 1820 kPa	D648	°F (°C)	410 (210)

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>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.</p> <p>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.</p> <p>Residence Time: should not exceed 6 minutes if possible, less with higher melt temperatures.</p> <p>Shot Size: should be between 25-75% of barrel capacity.</p> <p>Fill Rate: fast fill rates are suggested for best surface appearance.</p> <p>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.</p> <p>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.</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:
 Glass Reinforced, Heat Stabilized

INJECTION MOLDING PROCESSING

Prime Grade

FEATURES

- Easier molding, chemical resistance
- High stiffness, better surface
- Highest strength
- Impact resistance

MARKETS USED

- Automotive Applications
- Tool & Appliance
- Furniture & Household
- Sports & Leisure

APPLICATIONS

- Assist Rails
- Backpack Frame
- Door Handle
- Inline Skate
- Intake Manifold
- Power Tool Housing
- Rifle Stock
- Roof Rack
- Seat Adjuster Levers

APPROVALS

- FMVSS 302: 0.58 in/min (14.8 mm/min)

AUTOMOTIVE SPECIFICATION

- MS-DB41 CPN 3465

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DISCLAIMER



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