

Nylene® 5133 HS

TECHNICAL DATASHEET

TDS Ref # 121 Reviewed: 3/5/2018

DESCRIPTION

- Nylene 5133 HS is a heat stabilized, 33% glass fiber-reinforced nylon 6/6 featuring high tensile strength and stiffness.
- Suitable for applications where strength and stiffness are required.
- Exhibits an improved impact resistance and flexibility over unmodified nylons

PROPERTIES	TEST METHOD	UNIT	VALUE
PHYSICAL PROPERTIES			
Density	ISO 1183/A	g/cm ³	1.37
Mold Shrinkage	n/a	in/in	0.002
MECHANICAL PROPERTIES			
Charpy Notched Impact Strength	ISO 179/1eA	kJ/m ² (ft-lb/in ²)	12 (5.71)
Flexural Modulus	ISO 178	MPa	9300
Notched Izod @ 23°C	ISO 180	kJ/m ²	12
Tensile Modulus	ISO 527	MPa	10,000
Tensile Strength	ISO 527	MPa	190
THERMAL PROPERTIES			
Melt Point	ISO 11357	°C (°F)	263 (505)

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)	Melt Temperature: 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)	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.
	Front Zone	540-590 (282-310)	Residence Time: should not exceed 6 minutes if possible, less with higher melt temperatures.
	Nozzel	535-585 (279-307)	Shot Size: should be between 25-75% of barrel capacity.
	Melt Temp.	550-600 (287-316)	Fill Rate: fast fill rates are suggested for best surface appearance.
PRESSURE	Injection	5-15,000	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.
	Hold	4-12,000	Drying Temperature: 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:
Glass Reinforced

INJECTION MOLDING PROCESSING

Prime Grade

FEATURES

- High tensile strength
- High heat, stiffness
- Chemical resistance

MARKETS USED

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

APPLICATIONS

- Appliance Footing
- Bracket
- Coil Bobbins
- Electrical Connector
- Intake Manifold
- Oil Fitting

APPROVALS

- FMVSS 302: 1.45 in/min (36.8 mm/min)

AUTOMOTIVE SPECIFICATION

- MSDB41 CPN 3969
- ASTM D4066 PA012G33
- ESE-M4D287-B
- GMP.PA66.013
- ESE-M4D287-B
- ESE-M4D349-A
- WSK-M4D663-A
- MS-DB41 CPN 1900
- MS-DB41 CPN 3969
- MS-DB41 CPN 4376
- ASTM D4066 PA012G35 KD160



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