

Nylene[®] 5133 HSL

TECHNICAL DATASHEET

TDS Ref # 1113 Reviewed: 2021-04-26

DESCRIPTION

- Nylene 5133 HS is a heat stabilized, lubricated, 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, Lubricated, Heat Stabilized

INJECTION MOLDING PROCESSING

Prime Grade

Prime

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

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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