

Nylene® 5145 HS

TECHNICAL DATASHEET

TDS Ref # 842 Reviewed: 12/11/2014

DESCRIPTION

- Nylene 5145 HS is a 45% glass fiber-reinforced nylon 6/6 featuring high tensile strength and stiffness.

PROPERTIES	TEST METHOD	UNIT	VALUE
PHYSICAL PROPERTIES			
Density	ISO 1183	g/cm ³	1.50
Mold Shrinkage	D955	mm/mm	.02
MECHANICAL PROPERTIES			
Charpy Impact	ISO 179	kJ/m ²	132 at 23°C
Flexural Modulus	ISO 178	MPa	9220
Tensile Strength	ISO 527	MPa	182
THERMAL PROPERTIES			
DTUL @ 1800 kPa	ISO 75	°C	242
Melt Point	ISO 11357	°C (°F)	255

NOTES

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

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

TEMPERATURE °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, Internally Lubricated,
 Heat Stabilized

INJECTION MOLDING PROCESSING

Prime Grade

FEATURES

- Good Chemical Resistance
- High Heat Resistance
- Very High Strength and Stiffness

MARKETS USED

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

APPLICATIONS

- Air Intake Manifolds
- Appliance Footing
- Bracket
- Coil Bobbins
- Electrical Connector
- Engine Mounts
- Housing
- Light Reflector
- Oil Fitting
- Power Equipment Housings
- Pulley

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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