

Nylene® 311 HS

TECHNICAL DATASHEET

TDS Ref # 85 Reviewed: 4/24/2018

DESCRIPTION

- Exhibits an improved impact resistance and flexibility over unmodified nylons
- Impact-modified nylon 6,6 molding resin with increased flexibility
- Retains the excellent chemical and heat resistance typical of all nylon products

PROPERTIES	TEST METHOD	UNIT	VALUE
PHYSICAL PROPERTIES			
Mold Shrinkage	n/a	in/in	0.012
Specific Gravity	D792	n/a	1.08
MECHANICAL PROPERTIES			
Elongation	D638	%	50
Flexural Modulus	D790	psi (MPa)	260,000 (1,795)
Notched Izod @ 23°C	D256	ftlb/in (J/m)	3.0 (160)
Tensile Strength	D638	psi (MPa)	8,700 (60)
THERMAL PROPERTIES			
DTUL @ 1820 kPa	D648	°F (°C)	140 (60)
Melt Point	D3418	°F (°C)	485 (252)

NOTES

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

PROCESSING CONSIDERATIONS: PA 6/6 IMPACT MODIFIED

°F (°C)	Rear Zone	500-540 (260-282)	<p>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.</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 (65-82°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.</p>
	Center Zone	520-560 (271-293)	
	Front Zone	540-580 (282-304)	
	Nozzel	535-575 (279-301)	
	Melt Temp.	540-580 (282-304)	
PRESSURE	Injection	7-15,000	
	Hold	5-12,000	
	Back	0-50	

CHARACTERISTICS

Resin Type: Nylon 6/6
 Product Characteristics:
 Unreinforced, Impact Modified, Flex Modified, Heat Stabilized

INJECTION MOLDING PROCESSING

Prime Grade

FEATURES

- Tough & scuff resistant
- Higher flexibility
- Higher toughness

MARKETS USED

- Automotive Applications
- General Applications
- Furniture & Household
- Sports & Leisure

APPLICATIONS

- Caster Wheel
- Clips
- Fasteners
- Safety Restraint Components
- Seat Belt Components
- Strap Clip

AUTOMOTIVE SPECIFICATION

- ESA-M4D267-A
- MS-DB41 CPN 3489

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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