

Nylene® 321 HS

TECHNICAL DATASHEET

TDS Ref # 86 Reviewed: 7/16/2013

DESCRIPTION

- Impact modified, heat stabilized nylon 6 injection molding resin.
- Inherent heat and chemical resistance typical of nylon 6 resins, while having higher toughness for uses where some impact may occur during service
- Suitable for such applications and uses which require higher toughness and flexibility

PROPERTIES	TEST METHOD	UNIT	VALUE
PHYSICAL PROPERTIES			
Mold Shrinkage	n/a	in/in	0.012
Specific Gravity	D792	n/a	1.11
MECHANICAL PROPERTIES			
Elongation @ Break	(%)	psi (MPa)	100
Flexural Modulus	D790	psi (MPa)	280,000 (1,930)
Notched Izod @ 23°C	D256	ft. lb./ in. (J/m)	3.5 (187)
Tensile Strength	D638	psi (MPa)	8,000 (55)
THERMAL PROPERTIES			
DTUL @ 1820 kPa	D648	°F (°C)	129 (54)
Melt Point	D3418	°F (°C)	420 (215)

NOTES

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

PROCESSING CONSIDERATIONS: PA 6 IMPACT MODIFIED

°F (°C)	Rear Zone	440-500 (227-260)	Melt Temperature: 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.
	Center Zone	460-520 (238-271)	
	Front Zone	480-540 (249-282)	
	Nozzel	480-540 (249-282)	
	Melt Temp.	480-540 (249-282)	
PRESSURE	Injection	7-15,000	Residence Time: should not exceed 6 minutes if possible, less with higher melt temperatures
	Hold	5-12,000	Shot Size: should be between 25-75% of barrel capacity.
	Back	0-50	Fill Rate: fast fill rates are suggested for best surface appearance.
			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.
			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.

CHARACTERISTICS

Resin Type: Nylon 6

Product Characteristics:

Unreinforced, Impact Modified, Heat Stabilized

INJECTION MOLDING PROCESSING

Prime Grade

FEATURES

- Higher toughness
- Higher flexibility
- Scuff resistant

MARKETS USED

- Automotive Applications
- General Applications
- Furniture & Household

APPLICATIONS

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

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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