

Nylene® 743HS

TECHNICAL DATASHEET

TDS Ref # 157 Reviewed: 5/17/2017

DESCRIPTION

- Heat stabilized, high impact modified nylon 6 suitable for both molding and extrusion.
- Cylinder temperatures should be in the 435 - 525°F range.
- Designed for excellent cold temperature impact.
- Outstanding high strength and high cold temperature impact.
- In addition to heat stabilization to prevent thermal degradation, parts molded from 743 HS have excellent impact strength right out of the mold without post conditioning.

PROPERTIES	TEST METHOD	UNIT	VALUE
PHYSICAL PROPERTIES			
Specific Gravity	D792	n/a	1.08
MECHANICAL PROPERTIES			
ARM Drop Impact, C.T., -30°C	ARM	ft.lbs.	150
ARM Drop Impact, C.T., -40°C	ARM	ft.lbs.	150
Drop Weight Impact @ RT	ARM	Ft-lbs	150
Elongation	D638	%	150
Flexural Modulus	D790	psi (MPa)	230,000 (1,586)
Notched Izod @ -40°C	D256	ft-lb/in (J/m)	3.5 (187)
Notched Izod Impact	D256	ft lb/in (J/m)	No Breaks
Tensile Strength	D638	psi (MPa)	7,700 (53)
THERMAL PROPERTIES			
Melt Point	ISO 11357 - D 3418	°C (°F)	219 (426)

NOTES

- Values are measured on dry specimens.

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:
 Impact Modified, Heat Stabilized

EXTRUSION PROCESSING

Tubing & Profile

INJECTION MOLDING PROCESSING

Prime Grade

MARKETS USED

- Automotive Applications
- Lawn and Garden

APPLICATIONS

- Fuel Reservoirs
- Fuel Tanks

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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