

Nylene® MACH 6

TECHNICAL DATASHEET

TDS Ref # 936 Reviewed: 5/23/2017

DESCRIPTION

- MACH 6 is a lubricated, nylon 6 designed for very fast cycling.
- Crystallization initiators provide fast molding cycles through rapid melt set-up.
- Most useful for applications requiring greater stiffness and a higher heat distortion temperature.
- Parts molded have better dimensional stability at moisture equilibrium than parts molded from conventional nylon.

PROPERTIES	TEST METHOD	UNIT	VALUE
PHYSICAL PROPERTIES			
Mold Shrinkage	n/a	in/in	0.014
Specific Gravity	D792	n/a	1.14
MECHANICAL PROPERTIES			
Elongation @ Break	D638	[%]	25
Flexural Modulus	D790	psi (MPa)	400,000 (2,759)
Notched Izod @ 23°C	D256	ft. lb./ in. (J/m)	0.8 (43)
Tensile Strength	D638	psi (MPa)	12,000 (83)
THERMAL PROPERTIES			
DTUL @ 1820 kPa	D648	°F (°C)	140 (60)
Melt Point	D3418	°F (°C)	428 (220)

NOTES

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

PROCESSING CONSIDERATIONS: PA 6 UNREINFORCED

°F (°C)	Rear Zone	430-475 (221-249)	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	440-500 (227-260)		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	460-520 (238-271)			Residence Time: should not exceed 6 minutes if possible, less with higher melt temperatures	
	Nozzel	460-520 (238-271)				Shot Size: should be between 25-75% of barrel capacity.
	Melt Temp.	460-520 (238-271)				
PRESSURE	Injection	4-12,000	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	3-9,000		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.		
	Back	0-50				

CHARACTERISTICS

Resin Type: Nylon 6

Product Characteristics:

Unreinforced, Lubricated, Fast Cycle

INJECTION MOLDING PROCESSING

Prime Grade

FEATURES

- Excellent Mold Release
- Fatigue Resistance
- General Purpose
- Good Friction characteristics
- Impact Resistant
- Resists Fuel, Oil, & Grease

MARKETS USED

- Automotive Applications
- General Applications
- Industrial Applications
- Furniture & Household

APPLICATIONS

- Air Intake Manifolds
- Bearing Cages
- Bearings
- Bottle Caps
- Cams
- Conveyor Roller
- Exterior/Interior Car Parts
- Fasteners
- Fuel Reservoirs
- Levers
- Parts Tray
- Racks
- Small and Large Appliances

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.



Headquarters and Facility:
55 Haul Road, Wayne, NJ 07470
P: 973-694-4141 | F: 973-694-3549

North American Sales Office:
31700 Telegraph Rd. Suite 235, MI 48025
P: 248-377-6769 | F: 248-377-3845

Nylene Custom Resins Facility:
1421 Hwy 136 W. Henderson, KY 42420
P: 270-826-7641 | TF: 800-626-7050

Nylene Canada Facility
200 McNab Street, Arnprior ON, K7S 3P2
P: 613-623-3191 | TF: 800-267-7394

For a complete listing of our global offices, visit:
www.nylene.com/contactus

www.nylene.com | info@nylene.com

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