

Nylene® 401

TECHNICAL DATASHEET

TDS Ref # 91 Reviewed: 4/24/2018

DESCRIPTION

- General purpose un-reinforced nylon 6 injection molding resin
- High flow characteristics at minimal processing temperatures
- Suitable for applications in both thin and heavy sections that require typical nylon characteristics and easy molding

PROPERTIES	TEST METHOD	UNIT	VALUE
PHYSICAL PROPERTIES			
Mold Shrinkage	n/a	in/in	0.012
Specific Gravity	D792	n/a	1.14
MECHANICAL PROPERTIES			
Elongation @ Break	D638	[%]	40
Flexural Modulus	D790	psi (MPa)	355,000 [2448]
Notched Izod @ 23°C	D256	ft. lb./ in. (J/m)	0.8 [43]
Tensile Strength	D638	psi (MPa)	10,900 (75)
THERMAL PROPERTIES			
DTUL @ 1820 kPa	D648	°F (°C)	131 [55]
DTUL @ 455 KPa	D648	°F (°C)	360 [182]
Melt Point	D3418	°F (°C)	428 [220]

NOTES

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

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)	Fill Rate: fast fill rates are suggested for best surface appearance.
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, General Purpose, High Flow, Mold Release

COMPOUNDING PROCESSING

Low RV

INJECTION MOLDING PROCESSING

Prime Grade

FEATURES

- Easy molding, great surface, good feel
- Easy mold, low wear
- Tough and strong
- Low RV, Internally lubed

MARKETS USED

- Automotive Applications
- Furniture & Household
- Sports & Leisure

APPLICATIONS

- Knife Handles
- Seat Adjuster Levers
- Strap Clip
- Window Blind

APPROVALS

- UL 94: V-2: All colors @ 1.47 mm - 3.10 mm
- FMVSS 302: DNB

AUTOMOTIVE SPECIFICATION

- ESF-M4D78-A
- ASTM D4066 PA0212

DISCLAIMER



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