

# Nylene® 401 MDS

## TECHNICAL DATASHEET

TDS Ref # 864 Reviewed: 4/12/2017

### DESCRIPTION

- Nylene 401 MDS is an injection molding grade resin containing molybdenum disulfide for improved wear resistance.
- The abrasion resistance of nylon is enhanced by the addition of molydisulfide.
- Optimum processing conditions should provide a melt temperature of 470 - 510°F at the nozzle.
- Excellent wear properties

PROPERTIES	TEST METHOD	UNIT	VALUE
<b>PHYSICAL PROPERTIES</b>			
Relative Viscosity	D789	Formic Acid	36
Specific Gravity	D792	n/a	1.20
<b>MECHANICAL PROPERTIES</b>			
Elongation	D638	%	20
Flexural Modulus	D790	psi (MPa)	400,000 [2,760]
Notched Izod @ 23°C	D256	ft. lb./ in. (J/m)	0.8 (43)
Tensile Strength	D638	psi (MPa)	11,500 [79]

### NOTES

- Testing conducted on dry-as-molded specimens at 73°F (23°C)

### PROCESSING CONSIDERATIONS: PA 6 UNREINFORCED

°F (°C)	Rear Zone	430-475 (221-249)	<p><b>Melt Temperature:</b> 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.</p> <p><b>Mold Temperature:</b> 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><b>Residence Time:</b> should not exceed 6 minutes if possible, less with higher melt temperatures</p> <p><b>Shot Size:</b> should be between 25-75% of barrel capacity.</p> <p><b>Fill Rate:</b> fast fill rates are suggested for best surface appearance.</p> <p><b>Regrind Level:</b> 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><b>Drying Temperature:</b> 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.</p>
	Center Zone	440-500 (227-260)	
	Front Zone	460-520 (238-271)	
	Nozzel	460-520 (238-271)	
	Melt Temp.	460-520 (238-271)	
PRESSURE	Injection	4-12,000	
	Hold	3-9,000	
	Back	0-50	

### CHARACTERISTICS

Resin Type: Nylon 6  
 Product Characteristics:  
 Unreinforced, Lubricated, Molybdenum Disulphide Lubricated

### INJECTION MOLDING PROCESSING

Prime Grade

### FEATURES

- Contains molybdenum disulfide

### 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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