

# NYCOA Polyamide 436

Polyamide 6

Nycoa (Nylon Corporation of America)

Message:

NYCOA 436 Nylon is general-purpose low viscosity injection-molding grade Nylon 6 that exhibits excellent melt fluidity, good toughness, stiffness, and strength. NYCOA 436 Nylon is listed by the National Sanitation Foundation under Standard 61 for use in products that come into contact with food or potable water. Typical applications include plumbing fittings, electronics parts, toys, and hardware items such as gears, fittings, casters, bearings, clips, fasteners, plugs, caps, and filter bowls.

General Information			
UL YellowCard	E86478-252065		
Features	Low viscosity		
	Rigid, good		
	Fast molding cycle		
	Good liquidity		
	Good strength		
	Good toughness		
	Compliance of Food Exposure		
Uses	Gear		
	Electrical components		
	Pipe components		
	Fasteners		
	Accessories		
	Toys		
	Bearing		
Agency Ratings	NSF 61		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.13	g/cm <sup>3</sup>	ASTM D792
Molding Shrinkage			ASTM D955
Flow	1.2	%	ASTM D955
Transverse flow	1.4	%	ASTM D955
Water Absorption (24 hr)	1.7	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	120		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength <sup>1</sup>	86.2	MPa	ASTM D638

Tensile Elongation <sup>2</sup> (Break)	50	%	ASTM D638
Flexural Modulus <sup>3</sup>	2650	MPa	ASTM D790
Flexural Strength <sup>4</sup>	100	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	48	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	185	°C	ASTM D648
1.8 MPa, not annealed	68.3	°C	ASTM D648
Melting Temperature	221	°C	DSC

#### Additional Information

The value listed as Melting Point DSC, was tested in accordance with ASTM D789.

Injection	Nominal Value	Unit
Drying Temperature	71.1 - 82.2	°C
Drying Time	4.0 - 6.0	hr
Rear Temperature	221 - 241	°C
Middle Temperature	235 - 252	°C
Front Temperature	246 - 260	°C
Nozzle Temperature	254 - 266	°C
Processing (Melt) Temp	249 - 266	°C
Mold Temperature	76.7 - 87.8	°C
Injection Rate	Fast	
Back Pressure	0.138 - 0.517	MPa
Cushion	1.59 - 6.35	mm
Screw L/D Ratio	16.0:1.0	
Screw Compression Ratio	3.0:1.0	

#### NOTE

1. 50 mm/min
2. 50 mm/min
3. 50 mm/min
4. 50 mm/min

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