

Nylene® PAC900-120U

TECHNICAL DATASHEET

TDS Ref # 998 Reviewed: 10/4/2018

DESCRIPTION

- Nylene PAC900-120U is a high viscosity copolymer of nylon 6 and 6,9.
- PAC900-120U has many of the properties desirable in nylon 6 coupled with the advantages of a copolymer, which include lower processing temperatures.

PROPERTIES	TEST METHOD	UNIT	VALUE
PHYSICAL PROPERTIES			
Relative Viscosity	D789	Formic Acid	120
Specific Gravity	D792	n/a	1.11
MECHANICAL PROPERTIES			
Elongation	D638	%	270
Flexural Modulus	D790	psi	245,000
Notched Izod Impact	D256	ft. Lb./in.	1.6
Tensile @ Yield	D638	psi	6,700
THERMAL PROPERTIES			
Melt Point	D3418	°F (°C)	392 (200)

NOTES

Effective processing is achieved with extruder and die temperatures in the range of 450 - 500 °F, but may be processed as low as 420 °F.

PROCESSING CONSIDERATIONS: PA 6/69 EXTRUSION

Zone °C (°F)	Feed	232 – 243 (450 - 470)	Residence Time: Screw should not be left idle for more than 3-4 minutes with melt in the barrel. Excess residence will be visible as black carbon specs in the melt.
	Transition	243 – 254 (470 - 490)	
	Metering	230 – 245 (445 – 475)	
	Die	249 – 260 (480 - 500)	
	Melt	249 – 260 (480 - 500)	
Line Rate	2 ½" extruder	1.5 - 1.9 pph/rpm	Drying Temperature: Although Nylene resins are packaged and delivered in a low moisture state, it is good material handling practice to use a hopper dryer to maintain dryness. Should pre-drying be necessary, use settings of 65 °C (150°F) air at dew point of -40 at a rate of 1 cu. ft. / hour per pound of resin and a residence time of 2-4 hours.
	3 ½" extruder	3.5 - 4.5 pph/rpm	
	4 ½" extruder	6.5 - 7.5 pph/rpm	
			Cooling and Sizing: While both air and water can be used as the cooling medium, air is preferred. The use of air allows additional time for sizing and reduces residual stress. This aids in reducing warpage, especially in profiles with varying wall sections. If water is used, heat the first section to above 38 °C (100°F) to reduce quenching and residual stress.
			Die Design: Draw down of 30% is typical for all dimensions except wall thickness.

CHARACTERISTICS

Resin Type: Nylon 6

Product Characteristics:

Copolymer, High RV

EXTRUSION PROCESSING

Film

Monofilament

Wire & Cable

FEATURES

- Toughness
- Chemical resistance
- Strength
- High elongation
- Good clarity
- Flexibility

MARKETS USED

- Lawn and Garden
- Extrusion

APPLICATIONS

- Cable Covering
- Extrusion Coating
- Fishing Line
- Monofilament
- Trimmer Line

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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