Nylene® PAC900-140U

TECHNICAL DATASHEET

TDS Ref # 980 Reviewed: 3/22/2018

DESCRIPTION

- Nylene PAC9-140U is a high viscosity copolymer of nylon 6 and 6,9.
- PAC9-140U has many of the properties desirable in nylon 6 coupled with the advantages of a copolymer, which include lower processing temperatures.
- Effective processing is achieved with extruder and die temperatures in the range of 450 - 525 °F (232°C - 274°C) but may be processed as low as 420 °F (216 °C).
- Nylene PAC900-140U advantages include high elongation, good clarity and flexibility, and lower processing temperatures.

CHARACTERISTICS

Resin Type: Nylon 6/69

Product Characteristics:

High RV

EXTRUSION PROCESSING

Film

PROPERTIES	TEST METHOD	UNIT	VALUE
PHYSICAL PROPERTIES			
Relative Viscosity	D789	Formic Acid	140
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

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

PROCESSING CONSIDERATIONS: PA 6/69 EXTRUSION

Zone °C (°F)	Feed	232 – 243 (450 - 470)
	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
	3 ½" extruder	3.5 - 4.5 pph/rpm
	4 ½" extruder	6.5 - 7.5 pph/rpm

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.

Regrind Level: Typically, up to 25% is recommended but higher levels are possible with little or no effect on flow and finish.

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.

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.

DISCLAIMER

Nylene®

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