

Nylene® 607 (ISO)

TECHNICAL DATASHEET

TDS Ref # 959 Reviewed: 10/16/2017

DESCRIPTION

- Optimum processing conditions should permit for a melt temperature of 550 - 575°F (289 - 301°C) at the die.
- Particularly recommended for the extrusion of thick slab, large rod stock, and large complex profiles.
- Very high viscosity extrusion resin having an ISO Sulfuric Acid viscosity of 6.
- Properties promote dimensional control for extrusion of pipe, tubing, film, and sheet.

PROPERTIES	TEST METHOD	UNIT	VALUE
PHYSICAL PROPERTIES			
Density	ISO 1183	g/cm ³	1.14
Relative Viscosity	ISO 307	Sulfuric Acid	6
MECHANICAL PROPERTIES			
Charpy Impact	ISO 179/1eU	kJ/m ²	8
Flexural Modulus	ISO 178	MPa	2750
Yield Tensile Strength	ISO 527	MPa	85
THERMAL PROPERTIES			
DTUL @ 1800 kPa	ISO 75	°C	65

NOTES

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

PROCESSING CONSIDERATIONS: EXTRUSION VERY HIGH VISCOSITY

Zone °F (°C)	Feed	500-530 (260-277)	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	520-560 (271-293)	Regrind Level: Typically, up to 25% is recommended but higher levels are possible with little or no effect on flow and finish.
	Metering	550-575 (288-302)	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 180 °F (82.2°C) 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.
	Die	550-575 (288-302)	
	Melt Temp.	550-575 (288-302)	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 100 °F (38°C) to reduce quenching and residual stress.
Line Rate	2 ½" extruder	1.5 - 1.9 pph/rpm	
	3 ½" extruder	3.5 - 4.5 pph/rpm	Die Design: Draw down of 30% is typical for all dimensions except wall thickness.
	4 ½" extruder	6.5 - 7.5 pph/rpm	Land length: should be around 10x wall thickness.

CHARACTERISTICS

Resin Type: Nylon 6
Product Characteristics:
Very High RV

BLOW MOLDING PROCESSING

n/a

EXTRUSION PROCESSING

Film

Tubing & Profile

FEATURES

- Excellent durability
- Excellent properties
- Excellent structural strength
- Good draw-down
- Good melt strength

MARKETS USED

- Packaging Industry
- Extrusion

APPLICATIONS

- Blown Film
- Film
- Large Complex Profiles
- Large Rod Stock
- Pipe
- Sheet
- Thick Slab
- Tubing

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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