

Nylene® 607

TECHNICAL DATASHEET

TDS Ref # 135 Reviewed: 7/22/2013

DESCRIPTION

- Very high viscosity extrusion resin having an ASTM relative viscosity of 800.
- Particularly recommended for the extrusion of thick slab, large rod stock, and large complex profiles.
- Optimum processing conditions should permit for a melt temperature of 550 - 575°F (289 - 301°C) at the die.
- Properties promote dimensional control for extrusion of pipe, tubing, film, and sheet.

PROPERTIES	TEST METHOD	UNIT	VALUE
PHYSICAL PROPERTIES			
Specific Gravity	D792	n/a	1.14
Water Absorption	D570	%	2.0
MECHANICAL PROPERTIES			
Flexural Modulus	D790	psi	400,000
Flexural Strength	D790	Psi	15,500
Notched Izod @ 23°C	D256	ft. lb./ in. (J/m)	0.9
Tensile Strength	D638	psi (MPa)	12,300
THERMAL PROPERTIES			
DTUL @ 264 psi/1.82 MPa	D648	°F (°C)	149 (65)
DTUL @ 66 psi/0.45 MPa	D648	°F (°C)	367 (186)

NOTES

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

PROCESSING CONSIDERATIONS: EXTRUSION 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:
Lubricated, High RV

BLOW MOLDING PROCESSING

Prime Grade

EXTRUSION PROCESSING

Film
Tubing & Profile

FEATURES

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

MARKETS USED

- Packaging Industry
- Extrusion

APPLICATIONS

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

AUTOMOTIVE SPECIFICATION

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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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