

Nylene® 615SA N

TECHNICAL DATASHEET

TDS Ref # 1002 Reviewed: 10/31/2018

DESCRIPTION

- Nylene® 615SA N is an extrusion grade nylon 6 resin suitable for cast and blown film in mono- or co-extrusion applications.
- Nylene® 615SA N is highly crystalline which yields good roll uniformity in cast film plus a low coefficient of friction.
- Nylene® 615SA N has superior grease resistance, toughness, resistance to abrasion, and does not absorb food odors.
- Nylene® 615SA N meets the requirements of FDA regulation 21 CFR 177.1500 for direct food contact.

PROPERTIES	TEST METHOD	UNIT	VALUE
PHYSICAL PROPERTIES			
Specific Gravity	D792	n/a	1.13
FILM PROPERTIES			
Elmendorf Tear	D1922	gms./mil.	56
Elongation	D882	%	290
Secant Modulus	D882	psi (MPa)	94,600
Tensile Yield Strength	D882	psi (MPa)	5,500
Ultimate Tensile Strength	D882	psi (MPa)	8,700

NOTES

- Nylene® 615SA N can be extruded at temperatures to 600 F (316C) for high speed cast operations. The recommended melt temperature for cast operations is about 530 F (275 C) and for blown film melt temperature should be about 536 F (280 C).
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- **FILM PROPERTIES = FILM CONDITIONED, AND TESTED IN TRANSVERSE DIRECTION.

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:
High RV

EXTRUSION PROCESSING

Film

FEATURES

- Good melt stability
- Good high melt strength

MARKETS USED

- Packaging Industry
- Food Packaging

APPLICATIONS

- Extrusion Coating for Paper Board
- Film
- Flexible Packaging
- Fresh & Processed Meat Packaging
- Juice Packaging/Milk Cartons
- Plastic Containers
- Protective Liner
- Single Layer/Multi Layer Film
- Stand Up Packaging for Barrier Strength

APPROVALS

- Direct Food Contact: FDA 21 CFR 177.1500

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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