

# Nylene® CP11211

## TECHNICAL DATASHEET

TDS Ref # 932 Reviewed: 5/11/2017

### DESCRIPTION

- FDA 21 CFR 177.1500
- Has the heat and chemical resistance of nylon, with the lower crystallinity typical of type 6/66 grades
- Nylene CP11211 is suitable for use in extrusion, and blown film applications
- Suitable for high clarity film

PROPERTIES	TEST METHOD	UNIT	VALUE
<b>PHYSICAL PROPERTIES</b>			
Oxygen Permeably	D3985	See Note#2	3.5*
Relative Viscosity	ISO 307	Sulfuric Acid	3.9
	D789	Formic Acid	135
Specific Gravity	D792	n/a	1.12
Viscosity Number	ISO307	cm <sup>3</sup> /gm	237
<b>MECHANICAL PROPERTIES</b>			
Break Stress	D638	MPa	95
Maximum Strain	D638	[%]	350
Maximum Stress	D638	Mpa	95
Tear Strength	D1922	grams	70
Yield Stress	D638	MPa	27
<b>THERMAL PROPERTIES</b>			
Melt Point	D3418	°C	195

### NOTES

- cc-mil/100 sq. in.-24 hr.-atm. @ 75 F.
- For comparison, values for nylon 6 monofilm of one mil was measured at 3.1 cc-mil/100 sq. in.-24 hr.-atm.
- Oxygen permeability measured using 1 mil. monofilm.

### PROCESSING CONSIDERATIONS: EXTRUSION HIGH VISCOSITY

Zone °F (°C)	Feed	500-530 (260-277)	<b>Residence Time:</b> 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)	<b>Regrind Level:</b> 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)	<b>Drying Temperature:</b> 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)	<b>Cooling and Sizing:</b> 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.
	Melt Temp.	550-575 (288-302)	<b>Die Design:</b> Draw down of 30% is typical for all dimensions except wall thickness.
Line Rate	2 ½" extruder	1.5 - 1.9 pph/rpm	<b>Land length:</b> should be around 10x wall thickness.
	3 ½" extruder	3.5 - 4.5 pph/rpm	
	4 ½" extruder	6.5 - 7.5 pph/rpm	

### CHARACTERISTICS

Resin Type: Nylon 6/6/6  
Product Characteristics:  
High RV, High Clarity

### EXTRUSION PROCESSING

Film  
Tubing & Profile

### 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](http://www.nylene.com/contactus)  
[www.nylene.com](http://www.nylene.com) | [info@nylene.com](mailto:info@nylene.com)

Copyright ©2019, Nylene. All rights reserved. Nylene is a designated trademark of Polymeric Resources Corporation.