Nylene® CP41215

TECHNICAL DATASHEET

TDS Ref # 930 Reviewed: 5/11/2017

DESCRIPTION

- Has the heat and chemical resistance of nylon, with the lower crystallinity typical of type 6,6/6 grades
- Meets the requirements of FDA regulation for direct food contact
- Nylene CP41215 is suitable for use in extrusion, and film applications
- Suitable for high clarity film

PROPERTIES	TEST METHOD	UNIT	VALUE
PHYSICAL PROPERTIES			
Oxygen Permeably	D3985	See Note#2	3.5*
Relative Viscosity	ISO 307	Sulfuric Acid	4.0
	D789	Formic Acid	140
Specific Gravity	D792	n/a	1.12
Viscosity Number	ISO307	cm³/gm	240
MECHANICAL PROPERTIES			
Break Stress	D638	MPa	95
Maximum Strain	D638	[%]	350
Maximum Stress	D638	Mpa	95
Tear Strength	D1922	grams	70
Yield Stress	D638	MPa	27
THERMAL PROPERTIES			
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)
	Transition	520-560 (271-293)
	Metering	550-575 (288-302)
	Die	550-575 (288-302)
	Melt Temp.	550-575 (288-302)
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 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.

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.

Die Design: Draw down of 30% is typical for all dimensions except wall thickness.

Land length: should be around 10x wall thickness.

CHARACTERISTICS

Resin Type: Nylon 6/66/9

Product Characteristics:

High RV, High Clarity

EXTRUSION PROCESSING

Film

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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