ATTANE™ NG 4701G

The Dow Chemical Company - Ultra Low Density Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

ATTANE™ NG 4701G Polyethylene Resin is a great abuse resistance copolymer offering extremely high impact strength, combined with good tear and exceptional optics. It has the added benefit of being easy to process (low melt temperature, low extruder amps and low screen pack backpressure) which translates into quality film rolls due to its bubble stability.

Main Characteristics:

- Ultra low density ethylene/octene copolymer
- High performance film applications

Complies with:

- U.S. FDA 21 CFR 177.1520(c)3.2a.
- Canadian HPFB No Objection

Consult the regulations for complete details.

General			
Material Status	• Commercial: Active		
Availability	• North America		
Additive	• Antiblock: No	• Processing Aid: No	• Slip: No
Agency Ratings	• FDA 21 CFR 177.1520(c) 3.2a	• HPFB (Canada) No Objection	
Forms	• Pellets		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.914		ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	0.80	g/10 min	ASTM D1238
Films	**Nominal Value**	**Unit**	**Test Method**
Film Thickness - Tested	1	mil	
Film Puncture Energy	55.0	in·lb	Internal Method
Film Puncture Force	16.0	lbf	Internal Method
Film Puncture Resistance	400	ft·lb/in³	Internal Method
Film Toughness - MD	880	ft·lb/in³	ASTM D882
Film Toughness - TD	850	ft·lb/in³	ASTM D882
Secant Modulus			ASTM D882
1% Secant, MD	20500	psi	
2% Secant, MD	18000	psi	
Secant Modulus			ASTM D882
1% Secant, TD	21500	psi	
2% Secant, TD	19000	psi	
Tensile Strength - MD (Yield)	1300	psi	ASTM D882
Tensile Strength - TD (Yield)	1250	psi	ASTM D882
Tensile Strength - MD (Break)	6000	psi	ASTM D882
Tensile Strength - TD (Break)	5400	psi	ASTM D882
Tensile Elongation - MD (Break)	400	%	ASTM D882
Tensile Elongation - TD (Break)	450	%	ASTM D882
Dart Drop Impact	380	g	ASTM D1709B

ATTANE™ NG 4701G

The Dow Chemical Company - Ultra Low Density Polyethylene Resin

Films	Nominal Value	Unit	Test Method
Elmendorf Tear Strength - MD	250	g	ASTM D1922
Elmendorf Tear Strength - TD	600	g	ASTM D1922
Thermal	**Nominal Value**	**Unit**	**Test Method**
Vicat Softening Temperature	210	°F	ASTM D1525
Melting Temperature (DSC)	214	°F	ISO 3146
Optical	**Nominal Value**	**Unit**	**Test Method**
Gloss (45°)	49		ASTM D2457
Haze	11.0	%	ASTM D1003

Processing Information

Extrusion Notes

Fabrication Conditions For Blown Film:

- Screw Size: 3.5 in.
- Screw Type: DSBII
- Die Gap: 70 mil (1.8 mm)
- Output: 12 lb/hr/in of die circumference
- Die Diameter: 8 in.
- Blow-Up Ratio: 2.5:1
- Frost Line Height: 39 in.
- Melt Temperature 425°F

Notes

[1] Typical properties: these are not to be construed as specifications.