



ATTANE™ NG 4701G

Ultra Low Density Polyethylene Resin

Overview

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.

Additive

- Antiblock: No
- Slip: No
- Processing Aid: No

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.912 g/cm ³	0.912 g/cm ³	ASTM D792
Base Density ¹	0.912 g/cm ³	0.912 g/cm ³	Dow Method
Melt Index (190°C/2.16 kg)	0.80 g/10 min	0.80 g/10 min	ASTM D1238
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	1.0 mil	25 µm	
Film Puncture Energy	55.0 in·lb	6.21 J	Dow Method
Film Puncture Force	16.0 lbf	71.2 N	Dow Method
Film Puncture Resistance	400 ft·lb/in ³	33.1 J/cm ³	Dow Method
Film Toughness			ASTM D882
MD	880 ft·lb/in ³	72.8 J/cm ³	
TD	850 ft·lb/in ³	70.3 J/cm ³	
Secant Modulus			ASTM D882
1% Secant, MD	20500 psi	141 MPa	
2% Secant, MD	18000 psi	124 MPa	
1% Secant, TD	21500 psi	148 MPa	
2% Secant, TD	19000 psi	131 MPa	
Tensile Strength			ASTM D882
MD : Yield	1300 psi	8.96 MPa	
TD : Yield	1250 psi	8.62 MPa	
MD : Break	6000 psi	41.4 MPa	
TD : Break	5400 psi	37.2 MPa	
Tensile Elongation			ASTM D882
MD : Break	400 %	400 %	
TD : Break	450 %	450 %	
Dart Drop Impact	380 g	380 g	ASTM D1709B
Elmendorf Tear Strength			ASTM D1922
MD	250 g	250 g	
TD	600 g	600 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	210 °F	99.0 °C	ASTM D1525
Melting Temperature (DSC)	214 °F	101 °C	ISO 3146
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°)	49	49	ASTM D2457
Haze	11 %	11 %	ASTM D1003



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

