



ATTANE™ 4404G

Ultra Low Density Polyethylene Resin

Overview

- Provides improved cling in one-sided cling applications
- It has improved toughness and optical properties
- Complies with CANADIAN HPFB NO OBJECTION (WITH LIMITATIONS)
- When used unmodified for food contact applications, ATTANE™ 4404G Ultra Low Density/Octene Copolymer will comply with the Federal Food, Drug, and Cosmetic Act as a food contact substance as a result of a premarket food contact notification (FCN) with an effective date of October 7, 2004 under FCN 424. This notification allows for use of this product as articles or components of articles used in contact with all food types under Conditions of Use A through H, as described in U.S. FDA Table 2 of 21 CFR § 176.170(c). The composition of this product complies with the requirements for use in contact with food of the EU-Directive 2002/72/EC. Contact a Dow Sales Office to obtain a detailed food contact compliance letter for this product.

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.904 g/cm ³	0.904 g/cm ³	ASTM D792
Melt Index (190°C/2.16 kg)	4.0 g/10 min	4.0 g/10 min	ASTM D1238
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Puncture Resistance			Dow Method
0.800 mil (20.3 µm)	228 ft-lb/in ³	18.9 J/cm ³	
2.00 mil (50.8 µm)	211 ft-lb/in ³	17.5 J/cm ³	
Secant Modulus			ASTM D882
2% Secant, MD: 0.800 mil (20.3 µm)	8530 psi	58.8 MPa	
2% Secant, MD: 2.00 mil (50.8 µm)	9070 psi	62.6 MPa	
2% Secant, TD: 0.800 mil (20.3 µm)	9380 psi	64.7 MPa	
2% Secant, TD: 2.00 mil (50.8 µm)	9140 psi	63.0 MPa	
Tensile Strength			ASTM D882
MD: Yield, 0.800 mil (20.3 µm)	1020 psi	7.00 MPa	
MD: Yield, 2.00 mil (50.8 µm)	980 psi	6.76 MPa	
TD: Yield, 0.800 mil (20.3 µm)	713 psi	4.92 MPa	
TD: Yield, 2.00 mil (50.8 µm)	919 psi	6.34 MPa	
MD: Break, 0.800 mil (20.3 µm)	5350 psi	36.9 MPa	
MD: Break, 2.00 mil (50.8 µm)	4730 psi	32.6 MPa	
TD: Break, 0.800 mil (20.3 µm)	4220 psi	29.1 MPa	
TD: Break, 2.00 mil (50.8 µm)	4700 psi	32.4 MPa	
Tensile Elongation			ASTM D882
MD: Break, 0.800 mil (20.3 µm)	500 %	500 %	
MD: Break, 2.00 mil (50.8 µm)	660 %	660 %	
TD: Break, 0.800 mil (20.3 µm)	710 %	710 %	
TD: Break, 2.00 mil (50.8 µm)	710 %	710 %	
Dart Drop Impact			ASTM D1709B
0.800 mil (20.3 µm)	> 850 g	> 850 g	
2.00 mil (50.8 µm)	> 850 g	> 850 g	
Elmendorf Tear Strength			ASTM D1922
MD: 0.800 mil (20.3 µm)	330 g	330 g	
MD: 2.00 mil (50.8 µm)	960 g	960 g	
TD: 0.800 mil (20.3 µm)	500 g	500 g	
TD: 2.00 mil (50.8 µm)	1100 g	1100 g	
Oxygen Permeability			ASTM D3985
73°F (23°C), 2.00 mil (50.8 µm)	1100 cm ³ ·mil/100in ² /atm/24 hr	450 cm ³ ·mm/m ² /atm/24 hr	
Water Vapor Transmission Rate			ASTM F1249
2.00 mil (50.8 µm)	2.2 g·mil/100in ² /atm/24 hr	0.85 g·mm/m ² /atm/24 hr	
Carbon Dioxide Transmission Rate			Dow Method
73°F (23°C), 0.00200 in (0.0508 mm)	5100 cm ³ ·mil/100in ² /atm/24 hr	2000 cm ³ ·mm/m ² /atm/24 hr	

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	160 °F	71.1 °C	ASTM D1525
Melting Temperature (DSC)	255 °F	124 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss			ASTM D2457
45°, 2.00 mil (50.8 µm)	90	90	
45°, 0.800 mil (20.3 µm)	92	92	
Clarity			ASTM D1746
0.800 mil (20.3 µm)	99.0	99.0	
2.00 mil (50.8 µm)	99.0	99.0	
Haze			ASTM D1003
2.00 mil (50.8 µm)	1.8 %	1.8 %	
0.800 mil (20.3 µm)	0.60 %	0.60 %	

Extrusion Notes

Fabrication Conditions For Cast Film:

- Die Gap: 25 mil (2 mm)
- Chill Roll Temperature: 70°F (21°C)
- Line Speed: 200 fpm (61 m/min)

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

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