



ATTANE™ 4404G

The Dow Chemical Company - Ultra Low Density Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

- Provides improved cling in one-sided cling applications
- It has improved toughness and optical properties

Complies with:

- Canadian HPFB No Objection (with limitations)
- EU, No 10/2011
- U.S. FDA CFR 176.170(c)
- U.S. FDA FCN 424

Consult the regulations for complete details.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Latin America • North America
Additive	• Antiblock: No • Processing Aid: No • Slip: No
Agency Ratings	• EU No 10/2011 • FDA FCN 424 • FDA 21 CFR 176.170(c), Table 2 ¹ • HPFB (Canada) No Objection ²
Forms	• Pellets
Processing Method	• Cast Film

ASTM & ISO Properties³

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.906		ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	4.0	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Film Puncture Resistance			Internal Method
0.80 mil	228	ft-lb/in ³	
2.0 mil	211	ft-lb/in ³	
Secant Modulus - 2% Secant, MD			ASTM D882
0.80 mil	8530	psi	
2.0 mil	9070	psi	
Secant Modulus - 2% Secant, TD			ASTM D882
0.80 mil	9380	psi	
2.0 mil	9140	psi	
Tensile Strength - MD			ASTM D882
Yield, 0.80 mil	1020	psi	
Yield, 2.0 mil	980	psi	
Tensile Strength - TD			ASTM D882
Yield, 0.80 mil	713	psi	
Yield, 2.0 mil	919	psi	
Tensile Strength - MD			ASTM D882
Break, 0.80 mil	5350	psi	
Break, 2.0 mil	4730	psi	

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Films	Nominal Value	Unit	Test Method
Tensile Strength - TD			ASTM D882
Break, 0.80 mil	4220	psi	
Break, 2.0 mil	4700	psi	
Tensile Elongation - MD			ASTM D882
Break, 0.80 mil	500	%	
Break, 2.0 mil	660	%	
Tensile Elongation - TD			ASTM D882
Break, 0.80 mil	710	%	
Break, 2.0 mil	710	%	
Dart Drop Impact			ASTM D1709B
0.80 mil	> 850	g	
2.0 mil	> 850	g	
Elmendorf Tear Strength - MD			ASTM D1922
0.80 mil	330	g	
2.0 mil	960	g	
Elmendorf Tear Strength - TD			ASTM D1922
0.80 mil	500	g	
2.0 mil	1100	g	
Oxygen Permeability (73°F, 2.0 mil)	1100	cm ³ ·mil/100in ² /atm/24 hr	ASTM D3985
Water Vapor Transmission Rate (2.0 mil)	2.2	g·mil/100in ² /atm/24 hr	ASTM F1249
Carbon Dioxide Transmission Rate (73°F, 2.0 mil)	5100	cm ³ ·mil/100in ² /atm/24 hr	Internal Method
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	160	°F	ASTM D1525
Melting Temperature (DSC)	255	°F	Internal Method
Optical	Nominal Value	Unit	Test Method
Gloss			ASTM D2457
45°, 0.800 mil	92		
45°, 2.00 mil	90		
Clarity			ASTM D1746
0.800 mil	99.0		
2.00 mil	99.0		
Haze			ASTM D1003
0.800 mil	0.600	%	
2.00 mil	1.80	%	

Processing Information

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

¹ Conditions of Use A through H

² With limitations

³ Typical properties: these are not to be construed as specifications.