



ATTANE™ 4201G

The Dow Chemical Company - Ultra Low Density Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

- For food packaging applications
- Offers toughness, seal properties, optical properties and processability

Complies with:

- U.S. FDA FCN 424
- Canadian HPFB No Objection (with Limitations)
- EU, No 10/2011
- Japan Hygienic Olefin and Styrene Plastics Association
- U.S. FDA-DMF

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	• DMF Unspecified Rating • EU No 10/2011	• FDA 21 CFR 177.1520(c) 3.2a • FDA FCN 424	• HPFB (Canada) No Objection ¹ • JHOSPA Unspecified Rating
Forms	• Pellets		
Processing Method	• Blown Film		

ASTM & ISO Properties ²

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.914		ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	1.0	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Film Puncture Resistance (1.0 mil)	380	ft·lb/in ³	Internal Method
Secant Modulus - 2% Secant, MD (1.0 mil)	20000	psi	ASTM D882
Secant Modulus - 2% Secant, TD (1.0 mil)	20500	psi	ASTM D882
Tensile Strength - MD (Yield, 1.0 mil)	1460	psi	ASTM D882
Tensile Strength - TD (Yield, 1.0 mil)	1310	psi	ASTM D882
Tensile Strength - MD (Break, 1.0 mil)	5580	psi	ASTM D882
Tensile Strength - TD (Break, 1.0 mil)	4990	psi	ASTM D882
Tensile Elongation - MD (Break, 1.0 mil)	520	%	ASTM D882
Tensile Elongation - TD (Break, 1.0 mil)	710	%	ASTM D882
Dart Drop Impact (1.0 mil)	870	g	ASTM D1709B
Elmendorf Tear Strength - MD (1.0 mil)	370	g	ASTM D1922
Elmendorf Tear Strength - TD (1.0 mil)	590	g	ASTM D1922
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	199	°F	ASTM D1525
Melting Temperature (DSC)	253	°F	Internal Method
Optical	Nominal Value	Unit	Test Method
Gloss (45°, 1.00 mil)	33		ASTM D2457
Haze ³ (1.00 mil)	1.70	%	ASTM D1003

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Processing Information

Extrusion Notes

Fabrication Conditions For Blown Film:

- Screw Size: 3.5 in.
- Screw Type: DBS II
- Die Gap: 70 mil (1.8 mm)
- Melt Temperature: 411°F (211°C)
- Output: 10 lb/hr/in. of die circumference
- Die Diameter: 8 in.
- Blow-Up Ratio: 2.5:1
- Screw Speed: 259 rpm
- Frost Line Height: 53 in.

Notes

¹ With limitations

² Typical properties: these are not to be construed as specifications.

³ Internal