Technical Information

ATTANE™ 4201G
Ultra Low Density Polyethylene Resin

Overview

- 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.

Additive

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

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	0.912	g/cm³	0.912	g/cm³	ASTM D792
Base Density [1]	0.912	g/cm³	0.912	g/cm³	Dow Method
Melt Index (190°C/2.16 kg)	1.0	g/10 min	1.0	g/10 min	ASTM D1238
Films	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Film Puncture Resistance (1.0 mil (25 µm))	380	ft·lb/in³	31.4	J/cm³	Dow Method
Secant Modulus					ASTM D882
2% Secant, MD : 1.0 mil (25 µm)	20000	psi	138	MPa	
2% Secant, TD : 1.0 mil (25 µm)	20500	psi	141	MPa	
Tensile Strength					ASTM D882
MD : Yield, 1.0 mil (25 µm)	1460	psi	10.1	MPa	
TD : Yield, 1.0 mil (25 µm)	1310	psi	9.03	MPa	
MD : Break, 1.0 mil (25 µm)	5580	psi	38.5	MPa	
TD : Break, 1.0 mil (25 µm)	4990	psi	34.4	MPa	
Tensile Elongation					ASTM D882
MD : Break, 1.0 mil (25 µm)	520	%	520	%	
TD : Break, 1.0 mil (25 µm)	710	%	710	%	
Dart Drop Impact (1.0 mil (25 µm))	870	g	870	g	ASTM D1709B
Elmendorf Tear Strength					ASTM D1922
MD : 1.0 mil (25 µm)	370	g	370	g	
TD : 1.0 mil (25 µm)	590	g	590	g	
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Vicat Softening Temperature	199	°F	92.8	°C	ASTM D1525
Melting Temperature (DSC)	253	°F	123	°C	Dow Method
Optical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Gloss (45°, 1.00 mil (25.4 µm))	33		33		ASTM D2457
Haze [2] (1.00 mil (25.4 µm))	1.70	%	1.70	%	ASTM D1003

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

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

[1] Base density is estimated using the assumption that every 1000 ppm of antiblock in the finished product raises the density of the polymer by 0.0006 g/cm³. Base density is the estimated density of the polymer if it did not contain any antiblock.

[2] Internal