ADVANCENE™ EE-1802-AAH

ETHYDCO - Linear Low Density Polyethylene

General Information

Product Description

ADVANCENE™ EE-1802-AAH is a Linear Low Density Polyethylene Resin is an ethylene-hexene-1 copolymer designed for cast stretch film applications such as industrial pallet wrap. Films containing EE-1802- AAH offer outstanding toughness and load holding properties.

Applications:

- Industrial pallet wrap stretch film applications
- Premium film packaging applications

General

Features	• Copolymer	• Good Toughness	
Uses	• Cast Film • Film	• Industrial Applications • Packaging	• Pallets • Stretch Wrap
Processing Method	• Cast Film	• Film Extrusion	

Properties [1]

Physical	Typical Value (English)		Typical Value (SI)		Test Method
Density / Specific Gravity	0.920		0.918	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	2.0	g/10 min	2.0	g/10 min	ASTM D1238 ISO 1133
Films	**Typical Value (English)**		**Typical Value (SI)**		**Test Method**
Film Puncture Energy					Internal Method
0.79 mil (20 µm)	38.0	in·lb	4.29	J	
2.0 mil (51 µm)	78.0	in·lb	8.81	J	
Film Puncture Force					Internal Method
0.79 mil (20 µm)	10.0	lbf	44.5	N	
2.0 mil (51 µm)	20.0	lbf	89.0	N	
Film Puncture Resistance					Internal Method
0.79 mil (20 µm)	372	ft·lb/in³	30.8	J/cm³	
2.0 mil (51 µm)	290	ft·lb/in³	24.0	J/cm³	
Film Toughness					ASTM D882
MD : 0.79 mil (20 µm)	2450	ft·lb/in³	203	J/cm³	
MD : 2.0 mil (51 µm)	2720	ft·lb/in³	225	J/cm³	
TD : 0.79 mil (20 µm)	4330	ft·lb/in³	358	J/cm³	
TD : 2.0 mil (51 µm)	3170	ft·lb/in³	262	J/cm³	
Secant Modulus					ASTM D882
2% Secant, MD : 0.79 mil (20 µm)	20600	psi	142	MPa	
2% Secant, MD : 2.0 mil (51 µm)	20000	psi	138	MPa	
2% Secant, TD : 0.79 mil (20 µm)	21800	psi	150	MPa	
2% Secant, TD : 2.0 mil (51 µm)	20000	psi	138	MPa	

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Films	Typical Value (English)		Typical Value (SI)		Test Method
Tensile Strength					ASTM D882
MD : Yield, 0.79 mil (20 µm)	1540	psi	10.6	MPa	
MD : Yield, 2.0 mil (51 µm)	1420	psi	9.80	MPa	
TD : Yield, 0.79 mil (20 µm)	1640	psi	11.3	MPa	
TD : Yield, 2.0 mil (51 µm)	1490	psi	10.3	MPa	
MD : Break, 0.79 mil (20 µm)	8080	psi	55.7	MPa	
MD : Break, 2.0 mil (51 µm)	5570	psi	38.4	MPa	
TD : Break, 0.79 mil (20 µm)	6850	psi	47.2	MPa	
TD : Break, 2.0 mil (51 µm)	5440	psi	37.5	MPa	
Tensile Elongation					ASTM D882
MD : Break, 0.79 mil (20 µm)	480	%	480	%	
MD : Break, 2.0 mil (51 µm)	700	%	700	%	
TD : Break, 0.79 mil (20 µm)	890	%	890	%	
TD : Break, 2.0 mil (51 µm)	800	%	800	%	
Dart Drop Impact					
0.79 mil (20 µm)	130	g	130	g	ASTM D1709A
0.79 mil (20 µm)	< 100	g	< 100	g	ASTM D1709B
2.0 mil (51 µm)	330	g	330	g	ASTM D1709A
2.0 mil (51 µm)	210	g	210	g	ASTM D1709B
Elmendorf Tear Strength [2]					ASTM D1922
MD : 0.79 mil (20 µm)	220	g	220	g	
MD : 2.0 mil (51 µm)	790	g	790	g	
TD : 0.79 mil (20 µm)	640	g	640	g	
TD : 2.0 mil (51 µm)	1100	g	1100	g	

Thermal	Typical Value (English)		Typical Value (SI)		Test Method
Vicat Softening Temperature	210	°F	98.9	°C	ASTM D1525
Melting Temperature (DSC)	253	°F	123	°C	Internal Method

Optical	Typical Value (English)		Typical Value (SI)		Test Method
Gloss					ASTM D2457
20°, 0.787 mil (20.0 µm)	157		157		
20°, 2.01 mil (51.0 µm)	149		149		
45°, 0.787 mil (20.0 µm)	95		95		
45°, 2.01 mil (51.0 µm)	91		91		
Haze					ASTM D1003
0.787 mil (20.0 µm)	1.00	%	1.00	%	
2.01 mil (51.0 µm)	3.00	%	3.00	%	

Additional Information	Typical Value (English)		Typical Value (SI)		Test Method
Ultimate Stretch					Internal Method
0.8 mil (20.0 µm)	• 300 % • 220 g	%	• 300 % • 220 g	%	
2.0 mil (51.0 µm)	• 470 % • 310 g	%	• 470 % • 310 g	%	

Processing Information

Extrusion	Typical Value (English)		Typical Value (SI)	
Melt Temperature	525	°F	274	°C