

UmaPET HCM

Polyethylene Terephthalate

Ester Industries Ltd.

Message:

KEY FEATURES

UmaPET HCM is high clear medium metallized film with excellent metal gloss.

It exhibits good barrier properties along with good metal to film bond strength/adhesion.

It has high gloss, excellent thermal stability, mechanical properties, flex crack resistance.

APPLICATIONS

UmaPET HCM is used as sandwich barrier layer in flexible packaging applications which provides high metal gloss & good barrier properties in laminates for confectionary, snacks, chips, extruded foods, tea etc..

Useful for high aesthetic appeal in decorative, holographic (temper evident & temper proof), textiles, glitters, label face stocks & surface printing applications.

General Information			
Features	Barrier Resin		
	Bondability		
	Good Adhesion		
	Good Crack Resistance		
	High Clarity		
	High Gloss		
	Metallizable		
Uses	Decorative Parts		
	Film		
	Packaging		
Appearance	Clear/Transparent		
Forms	Film		
Physical	Nominal Value	Unit	Test Method
Molding Shrinkage			ASTM D1204
Flow : 150°C, 30 min, 0.0120 mm	2.5	%	
Flow : 150°C, 30 min, 0.0150 mm	2.5	%	
Flow : 150°C, 30 min, 0.0230 mm	2.5	%	
Flow : 150°C, 30 min, 0.0360 mm	2.5	%	
Flow : 150°C, 30 min, 0.0500 mm	2.5	%	
Across Flow : 150°C, 30 min, 0.0120 mm	0.40	%	
Across Flow : 150°C, 30 min, 0.0150 mm	0.40	%	
Across Flow : 150°C, 30 min, 0.0230 mm	0.40	%	
Across Flow : 150°C, 30 min, 0.0360 mm	0.40	%	
Across Flow : 150°C, 30 min, 0.0500 mm	0.40	%	
Surface Tension			ASTM D2578
15.0 µm	56	mN/m	

23.0 µm	56	mN/m	
36.0 µm	56	mN/m	
50.0 µm	56	mN/m	
Metallized side : 12.0 µm	56	mN/m	
Yield			Internal Method
12.0 µm	59.5	m ² /kg	
15.0 µm	47.6	m ² /kg	
23.0 µm	31.0	m ² /kg	
36.0 µm	19.8	m ² /kg	
50.0 µm	14.3	m ² /kg	
Optical Density			Internal Method
12.0 µm	-2.8 to 7.2	%	
15.0 µm	-2.8 to 7.2	%	
23.0 µm	-2.8 to 7.2	%	
36.0 µm	-2.8 to 7.2	%	
50.0 µm	-2.8 to 7.2	%	
Films	Nominal Value	Unit	Test Method
	12		
	15		
	23		
	36		
Film Thickness - Tested	50	µm	
Film Thickness - Recommended / Available	12, 15, 23, 36, 50 µm		
Tensile Strength			ASTM D882
MD : Break, 12 µm	206	MPa	
MD : Break, 15 µm	186	MPa	
MD : Break, 23 µm	186	MPa	
MD : Break, 36 µm	177	MPa	
MD : Break, 50 µm	167	MPa	
TD : Break, 12 µm	216	MPa	
TD : Break, 15 µm	206	MPa	
TD : Break, 23 µm	206	MPa	
TD : Break, 36 µm	186	MPa	

TD : Break, 50 μm	186	MPa	
Tensile Elongation			ASTM D882
MD : Break, 12 μm	100	%	
MD : Break, 15 μm	100	%	
MD : Break, 23 μm	100	%	
MD : Break, 36 μm	130	%	
MD : Break, 50 μm	130	%	
TD : Break, 12 μm	90	%	
TD : Break, 15 μm	90	%	
TD : Break, 23 μm	90	%	
TD : Break, 36 μm	120	%	
TD : Break, 50 μm	120	%	
Oxygen Permeability ¹			ASTM D3985
23°C, 12 μm	0.900	cm ³ /m ² /24 hr	
23°C, 15 μm	0.800	cm ³ /m ² /24 hr	
23°C, 23 μm	0.800	cm ³ /m ² /24 hr	
23°C, 36 μm	0.800	cm ³ /m ² /24 hr	
23°C, 50 μm	0.800	cm ³ /m ² /24 hr	
Water Vapor Transmission			ASTM F1249
-- ²	0.60	g/m ² /24 hr	
-- ³	0.60	g/m ² /24 hr	
-- ⁴	0.60	g/m ² /24 hr	
-- ⁵	0.60	g/m ² /24 hr	
-- ⁶	0.60	g/m ² /24 hr	
NOTE			
1.	0%RH		
2.	37.8°C, 90%RH, 36 μm		
3.	37.8°C, 90%RH, 50 μm		
4.	37.8°C, 90%RH, 23 μm		
5.	37.8°C, 90%RH, 12 μm		
6.	37.8°C, 90%RH, 15 μm		

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