

UmaPET TFM

Polyethylene Terephthalate

Ester Industries Ltd.

Message:

KEY FEATURES

UmaPET TFM is medium barrier metallized film, metallized on plain surface with plasma, other side plain. It exhibits good barrier properties along with good metal to film bond strength/adhesion.

It has excellent mechanical properties, flex crack resistance and excellent gloss.

APPLICATIONS

UmaPET TFM is used as sandwich barrier layer in flexible packaging applications which require good barrier and good bond strength in laminates.

Typical usage as barrier layer in laminates for confectionary, snacks, chips, extruded foods, tea etc. Used in different industrial applications like flexible ducts, fall sealing decoration etc.

General Information			
Features	Barrier Resin		
	Bondability		
	Good Adhesion		
	Good Crack Resistance		
	High Gloss		
	Metallizable		
Uses	Film		
	Laminates		
	Packaging		
Forms	Film		
Physical	Nominal Value	Unit	Test Method
Molding Shrinkage			ASTM D1204
Flow : 150°C, 30 min, 0.0100 mm	2.5	%	
Flow : 150°C, 30 min, 0.0120 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, 0.0100 mm	0.40	%	
Across Flow : 150°C, 30 min, 0.0120 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 - Metallized side			ASTM D2578
10.0 µm	56	mN/m	
12.0 µm	56	mN/m	
23.0 µm	56	mN/m	

36.0 µm	56	mN/m	
50.0 µm	56	mN/m	
Yield			Internal Method
10.0 µm	71.4	m ² /kg	
12.0 µm	59.5	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
10.0 µm	-2.8 to 7.2	%	
12.0 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
	10		
	12		
	23		
	36		
Film Thickness - Tested	50	µm	
Film Thickness - Recommended / Available	10, 12, 23, 36, 50 µm		
Tensile Strength			ASTM D882
MD : Break, 10 µm	206	MPa	
MD : Break, 12 µm	206	MPa	
MD : Break, 23 µm	186	MPa	
MD : Break, 36 µm	177	MPa	
MD : Break, 50 µm	167	MPa	
TD : Break, 10 µm	216	MPa	
TD : Break, 12 µm	216	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, 10 μm	100	%
MD : Break, 12 μm	100	%
MD : Break, 23 μm	100	%
MD : Break, 36 μm	130	%
MD : Break, 50 μm	130	%
TD : Break, 10 μm	90	%
TD : Break, 12 μm	90	%
TD : Break, 23 μm	90	%
TD : Break, 36 μm	120	%
TD : Break, 50 μm	120	%
Oxygen Permeability ¹	ASTM D3985	
23°C, 10 μm	0.900	cm ³ /m ² /24 hr
23°C, 12 μm	0.900	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, 10 μm	
6.	37.8°C, 90%RH, 12 μm	

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