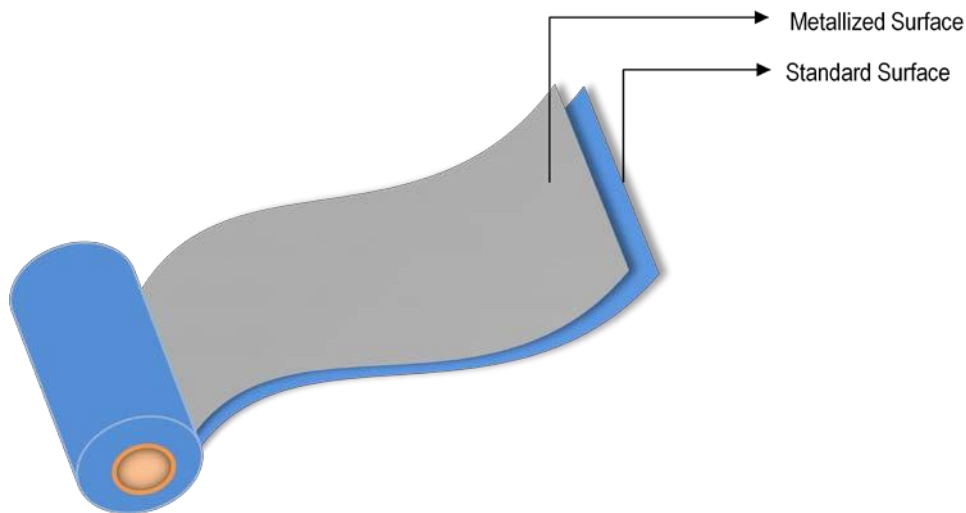

Product Name	Metallized Deformable Polyester film
Product code	ED190
Type	ED190 – Metallized side wound inside
Layer Structure	



Key Features

- Uma PET ED190 is metallized film with other side plain
- Film shows superior barrier properties
- The film possesses excellent deforming properties with superior fold retention, along with good thermal, mechanical, optical and surface properties
- UmaPET ED190 grade complies with US FDA, EC and REACH regulations for food contact application.
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Applications

- The film is used for various packaging applications where film deformability character is required.

Product Description: Metallized Deformable Polyester Film

Product code: ED190

Property	Test Method		Unit	Typical Value		
Physical						
Thickness	Internal		μ	15	18	22
			gauge	60	72	88
Yield	Internal		m ² /kg	47.8	39.7	32.6
			ft ² /lb	232.8	194.17	158.95
Density	ASTM D-1005		gm/cc	1.395	1.395	1.395
Tensile						
Tensile Strength (min)	MD	ASTM D-882	Kg/ cm ²	2200	2200	2200
	TD			2200	2200	2200
	MD		lb/in ²	31200	31200	31200
	TD			31200	31200	31200
Elongation (min)	MD	ASTM D-882	%	110	110	110
	TD			90	90	95
Deformability	Internal		-	Pass	Pass	Pass
Deform Retention (min)	Internal		%	95	95	95
Surface						
Wetting tension (min)	Plain Side	ASTM D-2578	Dyne/cm	42	42	42
	Metal Side			56	56	56
Optical						
Optical Density (tolerance ±5%)	Internal		-	2.2	2.2	2.2
Thermal						
Shrinkage @ 150 C and 30 minutes (max)	MD	ASTM D-1204	%	26	26	26
	TD			28	28	28
Barrier						
MVTR (37.8°C @ 90% RH)	ASTM D-1249		gm/m ² /24hr	0.8	0.8	0.8
			gm/100in ² /24hr	0.05	0.05	0.05
OTR (23°C @ 0% RH)	ASTM D - 3985		cc/m ² /24hr	0.8	0.8	0.8
			cc/100in ² /24hr	0.05	0.05	0.05
Metal Adhesion						
Metal / Film	Internal		Gm / 25 mm	> 175	> 175	> 175

MD- Machine Direction; TD- Transverse Direction.

The information contained herein is to be used only as a guide line for using UmaPET film. The specifications and characteristics mentioned are based on reliable test procedures. It is recommended for users of this film to make independent assessment by their own for its suitability to their specific end use prior to commercial usage. Ester Industries Ltd does not offer any guarantee on the results and does not accept any liability arising out of the use of the information contained herein.

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