



IMPERIAL™

FLEXIBLE FILMS

IMPERIAL **LE**

(Low Energy)

- **Multi-Layer Film**
- **Low Shrink Force** – excellent for printed material and soft goods
- **High Free Shrink** – reduces dog-ears on difficult packages
- **Broad temperature range**
- **Excellent clarity and gloss**
- **High shrink force**
- **Strong seals**
- **Available in 30, 40, 47, 60 and 75 gauge**
- **FDA approved**

Imperial **LE** film is a soft shrink multi-layer film that was designed to seal and shrink at lower temperatures.

The low shrink force allows you to wrap lightweight products without distortion but it also conforms well to irregular shaped products.

The LE film has exceptional strength, good tear resistance, and excellent clarity and gloss.



*Be the King of your
Purchasing Department!*



- Producing quality films since 2004
- State of the art manufacturing technology
- Multi-layer technology
- Superior optics on all films
- ISO-9001 Certified
- FDA Approved

IMPERIAL LE (LOW ENERGY)

TEST ITEM	UNIT	ASTM TEST	TYPICAL VALUES				
			10μm	12μm	15μm	19μm	
THICKNESS			10μm	12μm	15μm	19μm	
Tensile Strength (MD)	N/mm ²	D882	80	130	135	135	
Tensile Strength (TD)			72	125	125	130	
Elongation (MD)	%		95	130	130	140	
Elongation (TD)			82	125	120	135	
Tear (MD)	g	D1992	12.0	14.0	17.0	25.0	
Tear (TD)			11.0	13.5	16.5	24.0	
SEAL Strength (MD)	N/mm	F88	1.10	1.15	1.35	1.50	
SEAL Strength (TD) / Hot Wire Seal			0.63	1.18	1.38	1.65	
COF Dynamic (Film to Film)		D1894	0.18	0.17	0.16	0.19	
COF Static			0.20	0.18	0.17	0.20	
Dynamic (Hot Slip) @ 60°C			0.28	0.26	0.25	0.23	
Haze		D1003	3.20	2.80	3.60	4.10	
Clarity		D1746	97.5	96.5	96.0	95.0	
Gloss @ 45 deg		D2457	81.0	84.0	83.5	82.0	
Free Shrinkage		%	D2732	MD	TD	MD	TD
	80°C			20	22	20	18
	90°C			28	30	30	23
	100°C			44	46	42	42
	110°C			55	57	54	54
	120°C			63	64	62	61
	130°C			68	67	69	67
Shrink Tension		Mpa	D2838	MD	TD	MD	TD
	90°C			1.80	2.10	1.95	2.10
	100°C			2.10	2.20	2.40	3.45
	110°C			2.40	2.60	2.70	2.85
	120°C			2.35	2.40	2.60	2.60

The data provided is intended solely for informational purposes and represents our judgement based on tests performed. Ace Packaging Solutions, LLC, assumes no liability whatsoever in connection with the use of the information contained herein. Users are urged to conduct independent tests to determine final suitability for their specific application.

To purchase or for more information contact:



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"Thinking Outside of the Box"

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