



IMPACT™ Shrink Film

Impact

strength

when

you

need

it most



IMPACT™ Multi-Purpose Shrink Film

Total performance matters most when it comes to your packaging operation efficiency and product presentation. New Cryovac® *IMPACT™* shrink film delivers total performance better than any film on the market, and at a greater value.

Muscle Without Bulk

- **Revolutionary Engineering.** High-tech materials and processing enable *IMPACT™* shrink film to deliver stronger instrumented impact strength than heavier competitive films. Ultimate product performance can be achieved while reducing your total packaging costs.
- **Beauty and Durability.** *IMPACT™* shrink film has unsurpassed optics that promise your product will shine brightly on store shelves and its toughness ensures products will hold up under extreme conditions in production, packing, shipping, retail stocking and consumer handling.
- **Easy to Use.** *IMPACT™* shrink film has wide operating parameters making it extremely easy to use on a wide assortment of applications and equipment systems.
- **Applications.** *IMPACT™* shrink film works for a wide variety of applications including kitchen and bath items, hardware, lawn and garden products and multi-packs. It's ideal for irregularly shaped items especially those with sharp corners, and premium add-ons or "pack-ons."

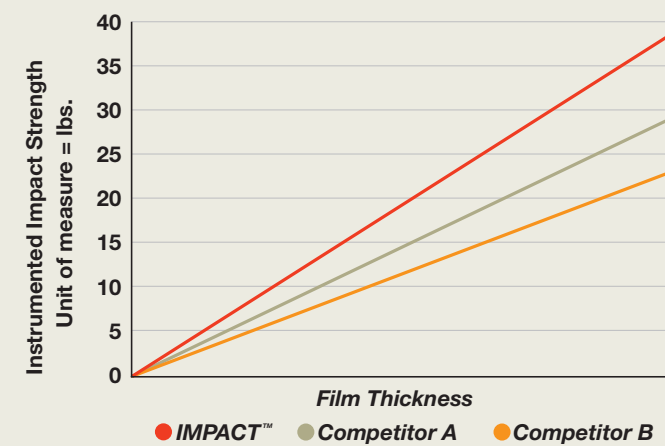
Film Highlights

- **Material.** Extremely tough, multi-layer, cross-linked polyolefin.
- **Impact Strength.** Abuse and puncture resistant. Strong seals. Less material, same package integrity.
- **Appearance.** Unmatched clarity, gloss and sheen. Package will stay taut and wrinkle-free and won't crack when temperature abused, insuring utmost appeal at the point of sale.
- **Machinability.** Can be run on a variety of equipment – centerfold, reverse fold and form-fill-seal machines.
- **Sealing Techniques.** Hot wire, constant hot knife, electrostatic.
- **Performance Grades.** Performance grades are based on the film's instrumented impact strength measured in pounds force. *IMPACT™* shrink film is available in instrumented impact strengths of 16lb., 19lb., 24lb., and 34lb. test to match your specific package requirements.



Instrumented Impact Strength

ASTM #D3763



Instrumented impact strength is the index of the film's dynamic strength which approximates what will occur when the package is dropped and is useful in predicting resistance of film to breakage from dropping or other quick blows.



IMPACT™ Properties

ASTM Test Method	Typical Values				
	16	19	24	34	
Grade/Instrumented Impact Strength (lb.)	D3763-95a	16	19	24	34
Density (g/cm ³)		0.923			
Yield (m ² /kg)		83.7	72.5	57.1	43.3
Length Single Wound (m)		3000	2500	2000	1500
Length Centrefolded (m)		1500	1250	1000	750
Roll lengths for printed films will be 50m shorter than plain film lengths					
Width Single Wound (mm)		100-1600			
Width Centrefolded (mm)		115-755	115-1060		
Core diameters (mm)		76			
		LD*		TD**	
Tensile strength (kg/cm ²)	D882-95	1100		1100	
Modulus (kg/cm ²)	D882-95	4000		4000	
Elongation (%)	D882-95	120		110	
Tear propagation resist. (min. – g/25mm)	D1938	4.0	5.2	6.6	8.7
Kinetic coeff. of friction (film/film)	D1894	0.25			
(film/metal)		0.25			
Heat seal range (°C)	COV-E228	From 125 to 165			
Heat seal strength (g/25mm)	COV-E228	1800	2000	3100	4100
Trim seal strength (g/25mm)	COV-E234	2500	3000	3500	3500
		LD*		TD**	
Free shrink @ 120°C (%)	D2732-83	65		65	
Shrink tension (kg/cm ²)	D2838-95	20		32	
MVTR (g/m ² , 24h)	F1249-90	27	23	18	14
O ₂ permeability (cm ³ /m ² /24h/bar)	D3985	11000	9500	7500	6000
CO ₂ permeability (cm ³ /m ² /24h/bar)	COV-E68	30500	26500	19500	15000
Haze (%)	D1003-95	1.8	1.8	2.2	2.5
Gloss (i=60°)	D2457-90	135			

Storage Conditions Recommended maximum temperature for long-term storage: max. 32°C, max. 80% R.H. , up to one year.
Food Law Approval Compliance with food contact legislation: *IMPACT™* film is approved for food contact in most European countries and USA.
Quality All Cryovac manufacturing operations in Europe have received ISO 9002 Quality Certification or its local equivalent.

Note: These are typical values for Cryovac films. They are not intended for use as limiting specifications. *Longitudinal Direction **Transverse Direction
 This information represents our best judgement based on the work done, but the Company assumes no liability whatsoever in connection with the use of information or findings contained herein.

Our Products Protect Your Products®

MD High Speed Films

- Designed to run at speeds up to 200 ppm
- Unparalleled clarity
- Provides the strongest lap seal available



Opti® Shrink Packaging

- A complete turnkey, cost-effective solution
- Opti® brand shrink films
- Wide coverage for food and non food applications

CorTuff™ High-Abuse Film

- Strongest impact strength available – ideal for heavy, odd-shaped products
- Can replace bulkier packaging materials
- Can be used as primary shipping media



Xenith™ Shrink Film

- Strongest soft shrink film available
- Performs well under variable operating conditions
- Very high shrink percentage

Distributed by:



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