

MPD High Speed Shrink Films

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

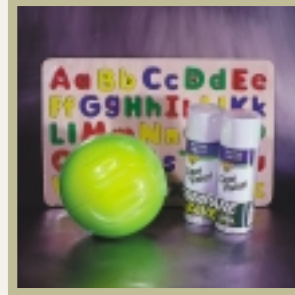


LD-935 Multi-Purpose Film

- Great for uniform-sized, lightweight products
- Longer rolls mean fewer changeovers, less downtime
- Superior optics for unsurpassed shelf appeal

D-940 Soft Shrink Film

- Perfect for softer items like printed paper goods
- Super low shrink force prevents distortion
- Runs on a wide variety of equipment



D-955 Multi-Purpose Film

- Most versatile film on the market
- Perfect for multi-packs and irregularly-shaped items
- Superior abuse resistance

Consultative Services

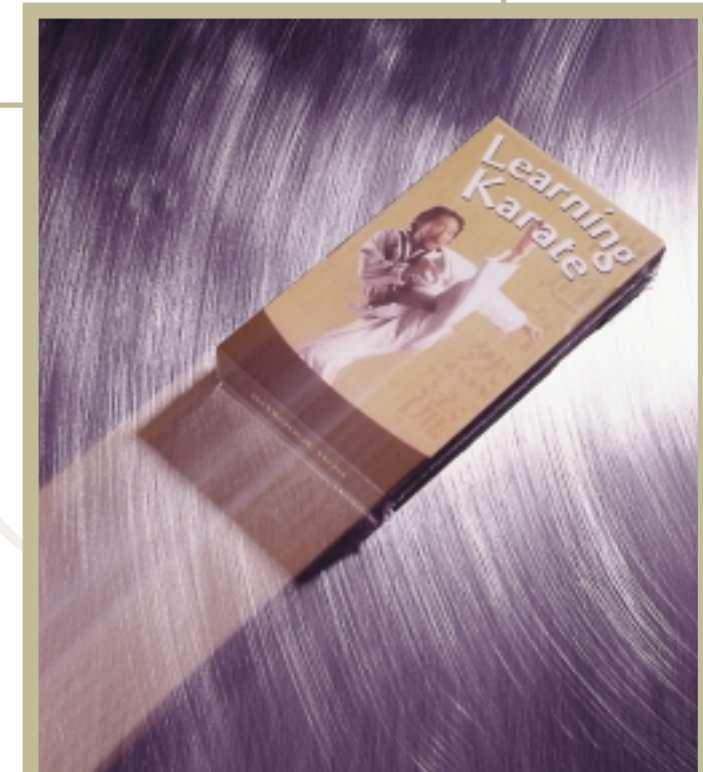
- Package concept development
- Film selection assistance
- Packaging line audits and economic analysis



Equipment Systems Support

- Feasibility studies of proposed equipment
- Custom-built shrink packaging systems
- Equipment installation, training and ongoing technical support

*The
Fastest
Way to
the
Perfect
Fit*



Distributed by:

High Speed Shrink Films

Literally no other films look as good on your package as Cryovac® MPD high-speed films. MPD-2055 and MPD-2100 are the fastest, flashiest, shiniest films around designed to help you market your products with both merchandising appeal and protection advantages.

It's All in the Package

- MPD-2055, A Mirror Image.** The unparalleled clarity of MPD-2055 allows your product to be the hero. Ideal for those items where shoppers' first impressions are critical. It is printable so you may be able to eliminate the need for secondary packaging.
- MPD-2100, A Secure Package.** Perfect for products requiring the strongest, most reliable lap seal available. MPD-2100's electrostatic seal allows you to reduce the film width of the overlap while improving overall operations, which means less down time and reduced reject rates at pack-off.
- Speed Matters.** Higher modulus allows clean tracking on high-speed equipment and both films are designed to run at speeds of up to 200 packages per minute.
- The Perfect Fit.** With wide sealing ranges and excellent shrink properties, both films produce a virtually distortion-free, contour-hugging package even under extreme hot or cold temperatures. These "all weather" films remain pliable even at minus 40 degrees Fahrenheit. Improved film to film slip characteristics also mean improved pack-off. And MPD won't stick to polyethylene bundling films.
- No Fumes.** The polyolefin construction of MPD means the films seal cleanly and consistently without disagreeable fumes or corrosion buildup.

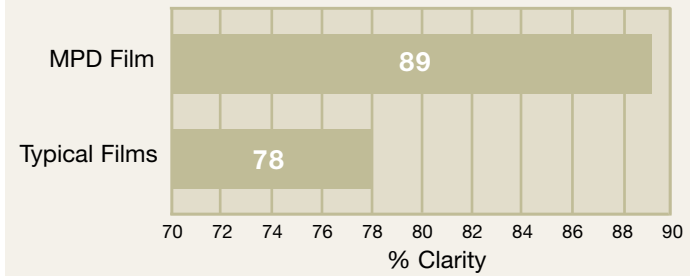
Film Highlights

- Material.** Multiple layers of co-extruded material, each contributing a specific performance characteristic, combine to form a versatile film with superior overall properties.
- Appearance.** Superior clarity, gloss and sheen. Perfectly tight-fitting packages that "jump" off the shelves.



- Toughness.** Resistant to scuffs and tears. Durability and tensile strength provide product protection during distribution and in-store handling.
- Machinability.** Excellent performance on all types of equipment from manuals to high-speed automatics.

The Clear Advantage



Properties

MPD-2055	ASTM Test Method	Typical Values				
Gauge		50	60	75	100	
Yield (sq. in. per pound)		60,700	55,000	40,500	30,400	
Haze (%)	D 1003-95	2.0	2.3	2.3	2.6	
Gloss (%)	D 2457-90	89	89	89	89	
Clarity (%)	D 1746-92	89	89	89	89	
Instrumented Impact Strength (lbs)	D 3763-95a	12.1	12.8	15.5	20.0	
Coefficient of Friction (film-to-film, kinetic)	D 1894-95	0.30	0.30	0.31	0.30	
Water Vapor Transmission Rate (gms/100sq. in./24hrs.); 100% RH, 100° F	F 1249-90	1.5	1.3	1.0	0.7	
Oxygen Transmission Rate (cc/m²/24hrs. @ 73° F, 1atm)	D 3985-95	7,877	7,500	6,315	5,303	
Tear Propagation (gms)	LD*	6.2	7.5	9.9	13.2	
	TD**	11.2	8.3	11.3	14.8	
Elongation at Break (%)	LD*	100	100	100	100	
	TD**	110	110	110	110	
Minimum Use Temperature		-40° F				
Maximum Storage Temperature		90° F				
		LD*		TD**		
Tensile Strength (psi)	D 882-95	16,500		17,500		
Modulus of Elasticity (psi @ 73° F)	D 882-95	110,000		110,000		
Free Shrink (%)	D 2732-83					
		@200° F	13	21		
		@220° F	23	32		
		@240° F	39	51		
		@260° F	51	59		
Shrink Tension (psi)	D 2838-95					
		@200° F	290	440		
		@220° F	405	560		
		@240° F	410	570		
		@260° F	385	510		

MPD-2100	ASTM Test Method	Typical Values		
Gauge		50	60	75
Yield (sq. in. per pound)		60,700	50,600	40,500
Haze (%)	D 1003-95	2.7	2.7	2.7
Gloss (%)	D 2457-90	84	84	84
Clarity (%)	D 1746-92	88	88	88
Instrumented Impact Strength (lbs)	D 3763-95a	10.8	11.9	14.2
Coefficient of Friction (film-to-film, kinetic)	D 1894-95	0.22	0.22	0.23
Water Vapor Transmission Rate (gms/100sq. in./24hrs.); 100% RH, 100° F	F 1249-90	1.6	1.5	1.2
Oxygen Transmission Rate (cc/m²/24hrs. @ 73° F, 1atm)	D 3985-95	9,700	8,700	7,700
Tear Propagation (gms)	LD*	4	5	6.5
	TD**	6	9	14
Elongation at Break (%)	LD*	90	90	90
	TD**	115	115	115
Minimum Use Temperature		-40° F		
Maximum Storage Temperature		90° F		
		LD*		TD**
Tensile Strength (psi)	D 882-95	16,000		16,000
Modulus of Elasticity (psi @ 73° F)	D 882-95	100,000		100,000
Free Shrink (%)	D 2732-83			
		@200° F	12	19
		@220° F	19	30
		@240° F	35	47
		@260° F	47	58
Shrink Tension (psi)	D 2838-95			
		@200° F	285	420
		@220° F	430	570
		@240° F	435	555
		@260° F	425	486

*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. MPD-2055 complies with the requirements of the Federal Food, Drug and Cosmetics Act, as amended, for the packaging of all foods, with the exception of high alcoholic, at temperatures of 65°C and below. MPD-2100 complies with the requirements of the Federal Food, Drug and Cosmetics Act, as amended, for the packaging of all foods, with the exception of high alcoholic, at temperatures of 65°C and below.