

## **Opti<sup>®</sup> 450 Shrink Film**

**High-Speed**  
**USPS-approved,**  
**Clarity, Easy Sealing**  
**And Strength**  
**Wrapped**  
**Into One**



# Opti® 450 Shrink Film

USPS-approved Shrink Film

## Opti® 450 Film Properties

ASTM Test Method

Typical Values

Gauge		50	60	75	100				
Yield (in <sup>2</sup> /lb.)		60,700	50,600	40,500	30,400				
Haze (%)	D 1003-95	2.7	2.7	2.7	2.7				
Gloss (%)	D 2457-90	84	84	84	84				
Clarity (%)	D 1746-92	88	88	88	88				
Instrumented Impact Strength (lbs)	D 3763-95a	10.8	11.9	14.2	18.5				
Coefficient of Friction (film-to-film, kinetic)	D 1894-95	0.22	0.22	0.23	0.23				
Water Vapor Transmission Rate (gms/100sq.in./24hrs.; 100%RH, 100° F)	F 1249-90	1.6	1.5	1.2	0.9				
Oxygen Transmission Rate (cc/m <sup>2</sup> /24hrs. @73° F, 1 atm)	D 3985-95	9,700	8,700	7,700	5,900				
Minimum Use Temperature		-40° F	-40° F	-40° F	-40° F				
Maximum Storage Temperature		90° F	90° F	90° F	90° F				
		LD*	TD**	LD*	TD**	LD*	TD**		
Tear Propagation (gms)	D 1938	4	6	5	9	6.5	14	8.7	19
Elongation at Break (%)	D 882-95	90	115	90	115	90	115	90	115
Tensile Strength (psi)	D 882-95	16,000		16,000		16,000		16,000	
Modulus of Elasticity (psi @ 73° F)	D 882-95	100,000		100,000		100,000		100,000	
Free Shrink (%)									
@200° F	D 2732-83	12	19	12	19	12	19	12	19
@220° F		19	30	19	30	19	30	19	30
@240° F		35	47	35	47	35	47	35	47
@260° F		47	58	47	58	47	58	47	58
Shrink Tension (psi)									
@200° F	D 2838-95	285	420	285	420	285	420	285	420
@220° F		430	570	430	570	430	570	430	570
@240° F		435	555	435	555	435	555	435	555
@260° F		425	486	425	486	425	486	425	486

Available in four gauges, Opti® 450 shrink film is the solution for your difficult to wrap products. Opti® 450 is a United States Postal Service (USPS) approved shrink film.

\*Longitudinal Direction \*\*Transverse Direction

This information represents our best judgment based on the work completed. The Company assumes no liability whatsoever with the use of information or findings contained herein. Current information is based on sampling and is subject to modification with additional data.