

Premium White Poly Bubble Mailers

TUFFlex™ Premium White Poly Bubble Mailers are durable, air cellular cushioned mailers made with bubble material that maintains a layer of air for maximum cushioning. The seamless bottom increases cushioning protection and strength, while the fully laminated construction and high-slip air cellular lining provide superior stiffness and facilitate insertion.

- Barrier bubble lining retains air and cushioning much longer than non-barrier bubbles
- Multi-layer post-industrial recycled content film is puncture, tear and water resistant.
- High strength hot melt adhesive closure provides additional tamper resistance and security.

Properties	Test Method	Requirement
Self-Seal Strength	ASTM D882 Tensile Strength	Minimum value 2.0 lb per inch
Side Seam Strength	ASTM D882 Tensile Strength	Minimum value 5.0 lb per inch
Exterior Film	Manufacturer Spec.	White (inside and outside)
Bubble Recycled Content – Recycled Plastic	Manufacturer Spec.	15% of the total resin weight
Crushed Bubble at Lip	Manufacturer Spec.	1/4"
Tolerances	Manufacturer Spec.	Width +/- 1/8" Length +/- 1/4"

TUFFlex™

tufflexpackaging.com

1 844-VERITIV

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Premium Natural Kraft Bubble Mailers

TUFFlex™ Natural Kraft Bubble Mailers are lightweight, air cellular cushioned mailers made with bubble material that maintains a layer of air for maximum cushioning. The seamless bottom increases cushioning protection and strength, while the fully laminated construction and high-slip air cellular lining provide superior stiffness and facilitate insertion.

Properties	Test Method	Requirement
Self-Seal Strength	TAPPI T-494 Tensile Strength	Minimum value 1.0 lb per inch
Side Seam Strength	TAPPI T-494 Tensile Strength	Minimum value 3.5 lb per inch
Natural Kraft Recycled Content* Recycled Paper Fibers	Manufacturer Spec.	Recycled Fibers = 100%
Crushed Bubble at Lip	Manufacturer Spec.	1/4"
Tolerances	Manufacturer Spec.	Width +/- 1/8", Length +/- 1/4"

- Made with 100% recycled paper fibers
- No bleaches or dyes lead to a stronger environmental profile
- Maintain cleaner appearance throughout the shipping cycle
- Barrier Bubble lining retains air and cushioning much longer than non-barrier bubbles
- Light weight and low profile for postal savings

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Performance Gray Poly Mailers

TUFFlex™ Gray Poly Mailers come with the industry's most secure closure and quality bag construction. Made with a durable, co-extruded polyethylene film, TUFFlex Mailers are puncture, tear, and water resistant. These gray/black opaque mailing envelopes withstand the rigors of shipping and handling, and help provide savings on postage.

Features:

- Film: 3 layer LLDPE film
- Adhesive: Pressure sensitive hot melt adhesive
- Side seals: Heat sealed
- Closure: Anti-static BOPP release liner

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Property		Test Description	Film	Units	ASTM Method
Gauge			2.0	Mil	D-2103
Slip	Inside	The test is used to determine the kinetic (moving) and static (starting) resistance of one surface being dragged across another.	50-75	f-grams	D-1894
	Outside		50-75	f-grams	
Coefficient of Friction (Kinetic)	Inside		.25-.375	f-grams/ 200	
	Outside		.25-.375	f-grams/ 200	
Tensile Strength/ Ultimate Load	MD	Tensile tests measure the force required to break a specimen and the extent to which the specimen stretches or elongates to that breaking point. Tensile tests produce a stress-strain diagram, which is used to determine tensile modulus.	3653	psi	D-882
	TD		2609	psi	
Elongation	MD		564	%	
	TD		579	%	
1% Secant Modulus	MD		25560	psi	
	TD		41870	psi	
Elmendorf Tear	MD	A pendulum impact tester is used to measure the force required to propagate an existing slit a fixed distance to the edge of the test sample.	428	grams	D-1922
	TD		3200	grams	
Dart Drop (Impact)		Falling dart impact is a traditional method for evaluating the impact strength or toughness of a plastic film. This test uses a single dart configuration and a single drop height, while varying the weight of the dart.	350	grams	D1709-09
Opacity			≥90.00	%	

Premium White Poly Mailers

TUFFlex™ White Poly Mailers come with the industry's most secure closure and quality bag construction. Made with a durable, co-extruded polyethylene film, TUFFlex Mailers are puncture, tear and water resistant. These white opaque mailing envelopes withstand the rigors of shipping and handling, and help provide savings on postage.

Features:

- Water resistant
- Puncture resistant
- Excellent opacity
- Easy to write on surface
- Accept stamps and labels
- Easy peel and seal adhesive closure
- Provide cost effective shipping

Property	ASTM Test Method	Value
Gauge	D-2103	2.5 Mil
Slip Inside & Outside	D-1894	65-105 f-grams
Coefficient of Friction (Kinetic) Inside & Outside	D-1894	0.325-0.525 f-grams/200
Tensile Strength/ Ultimate Load MD	D-882	3888 psi
Tensile Strength/ Ultimate Load TD	D-882	3475 psi
Elongation MD	D-882	712.195 %
Elongation TD	D-882	726.815 %
1% Secant Modulus MD	D-882	37730 psi
1% Secant Modulus TD	D-882	43800 psi
Elmendorf Tear MD	D-1922	907 grams
Elmendorf Tear TD	D-1922	1699 grams
Dart Drop (Impact)	D1709-09	420 grams
Opacity	N/A	≥90 %

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