

Product Selection Guide

ENGINEERED TAPES & LAMINATES



mactac® 
A LINTEC COMPANY



SOLUTIONS THAT STICK™

For over 60 years Mactac has been providing pressure-sensitive adhesive solutions for the industrial, medical, label and graphics markets. Our innovative product design and industry leading formulation expertise have positioned Mactac as a trusted brand for decades.

Mactac's parent company, LINTEC, is a leading global manufacturer of engineered adhesive materials. LINTEC materials are used in window films, interior-finish mounting, automotive security labeling and semi-conductors.

With LINTEC's guidance, Mactac's US operations have expanded to include several new facilities.

Introducing



Sustainability - Processes & People

With guidance under the LINTEC Group, we aim for opportunities to evaluate and expand Mactac's sustainability program to further reduce our footprint, inspire employees and showcase the value we provide to customers in their quest to meet the environmental needs of end-users.

Currently, Mactac is on a CO2 reduction journey across all sites.

- Goal - 30% reduction in CO2 emissions by 2030
- Protecting the natural environment through CO2 reduction isn't the whole story - when we look at sustainability, we need to look at both environmental and social activities.

Recent Milestones

Mactac is the first pressure-sensitive adhesive company to have products listed on the USDA's bio-preferred website.



Mactac is a leader in solvent-free coating technologies, opting to bring lower energy and lower environmental impact solutions to the North American market.

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Tape Selection Process

In order to select the best tape for your application it is critical to define these key performance requirements:

1. SUBSTRATE

Surface Texture

The texture of a surface can impact adhesive performance. Rough or textured surfaces can create adhesion challenges. Heavier coat weights tend to perform better on textured surfaces, and softer adhesives have better flow characteristics.

Surface Energy

The surface energy of a substrate will affect the adhesive's ability to wet out. Surface energy is measured in dynes/cm and the dyne level is the actual reading of the critical surface tension. The chart below compares the relative surface energy of common substrates.

Substrate Surface Energy Dynes/cm

HIGH 250 - 1100 Dynes/cm	Copper	MEDIUM 42-50 Dynes/cm	Kapton	MEDIUM 37-39 Dynes/cm	ABS	LOW <37 Dynes/cm	PVA
	Aluminum		Phenolic		Polycarbonate		Polystyrene
	Zinc		Nylon		PVC		Acetal
	Tin		Alkyd Enamel		Noryl		EVA
	Lead		Polyester		Acrylic		Polyethylene
	Stainless Steel		Epoxy				Polypropylene
	Glass		Polyurethane				Teflon

Surface Contamination

Adhesive performance is dependent on surface contact, in order to maximize adhesive contact be sure that the substrate is dry and free of contaminants. Moisture, grease, silicone and oils can negatively impact adhesive performance.

2. ENVIRONMENTAL EXPOSURE



Application Temperature

The temperature of the substrate and the adhesive when applied. General minimum application temperature is 50°F.

Service Temperature

Temperature that the adhesive will be exposed to during the life of the finished product.



UV Exposure

Direct sunlight or UV rays can cause adhesives to age, become brittle or discolor.



Exposure to Chemicals

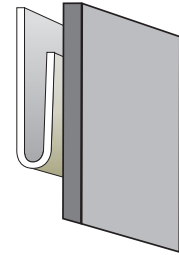
Solvents, chemicals and fuels can impact adhesive performance.

3. REQUIRED ADHESION LEVEL

The three common test methods to determine adhesive performance characteristics.

Peel Adhesion

Measures the force required to remove a PSA tape from a substrate at a controlled angle. The strength of the bond is determined by material's surface energy and the chemical composition of the adhesive.

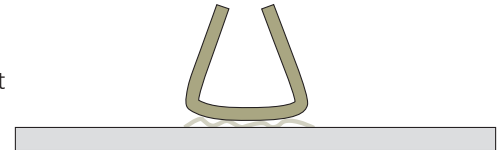


- Peel Angle - either 90 or 180 degrees
- Substrate - Stainless Steel
- Peel Rate - 12 inches/min
- Test Environment - 72F/50% RH
- Sample Dimensions - 1.0" wide

Quick Tack

Refers to the properties that allow a PSA to adhere to a surface under very light pressure. Determined by the ability of the adhesive to quickly wet out on the surface contacted.

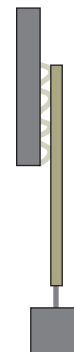
- Substrate - Stainless Steel







Shear Adhesion/Cohesion

Refers to the internal strength of the adhesive and its ability to resist splitting when external shear forces are applied in the same plane as the face or the carrier. Results are reported in time required to cause failure.

- Substrate - Stainless Steel
- Test environment - Temperature and humidity
- Shear direction - Vertical/horizontal



PSA Components

Category		Description
 Adhesion	High Surface Energy	>100 dynes: SS, Al, Glass, Ceramics
	Medium Surface Energy	38-70 dynes; Acrylic, PVC, ABS, PET
	Low Surface Energy	18-37 dynes: HDPE, LDPE, PP, EVA
	Textiles	Shoddy, Felts, Wovens, Non-wovens
	Rough Surfaces	Embossed, Pitted, Open cells, Concrete
	Holding Power/Shear Strength	Flow and creep resistance, Hold Loads
 Temperature Resistance	Low	Temperatures up to 180° F sustained
	Medium	Temperatures up to 240° F sustained
	High	Temperatures up to 325° F sustained
 Chemical Resistance	Polar Solvents	MEK, Alcohols, Acetone, ETAC
	Non Polar Solvents	Toluene, Heptane, Hexane, Gasoline
	Aqueous Solutions	Detergents, Cleaners, Soaps
	Low Molecular Weight	Plasticizers, Hydraulic fluids, Brake fluid
 Environmental Resistance	Moisture	Humidity, Submersion, Spray
	UV Exposure	Direct sunlight

Adhesives - Component that provides adhesion to the substrate.

Rubber	XT Rubber	High performance rubber adhesive with an excellent combination of peel, tack and shear properties.
	FBR899 Rubber	Most versatile rubber adhesive with exceptional quick tack and good peel & shear strength. #1 choice for foam bonding applications and textured materials.
	GS Series	The Rubber Rivet Tape - unique rubber adhesive designed to be coated from 5 to 50 mils thick. Provides superior peel, tack and shear performance.
	Ultra 555	High Shear Adhesive, resists creep, exhibits superior holding power and offers excellent performance on low surface energy materials.
	Arctic	Cold Temperature Adhesive, aggressive rubber based formula designed to bond to cold, wet surfaces at temperatures as low as -10°F (-23°C).
Acrylic	HTA410	High-tack acrylic adhesive, with moderate shear that provides strong bond to a variety of substrates including many foams, fabrics and plastics.
	HSA440	Highly cross-linked acrylic adhesive, moderate peel and tack with excellent cohesive strength. Great for bonding to smooth surfaces where adhesive appearance and processing is important.
	HBA724	High performance acrylic adhesive with high tack and shear strength. Excellent temperature resistance.
	GP310	Good temperature resistance, good plasticizer resistance, high UV resistance
	MP481	Solvent acrylic adhesive with moderate peel and tack, good shear strength
	LS55	Modified solvent acrylic adhesive with excellent low surface energy performance.
	LV820	Low VOC, Acid Free acrylic adhesive that provides high-tack and peel, design for use in applications that require aggressive performance combined with no out-gassing or fogging
	LV840	Low VOC, Acid Free acrylic adhesive that provides moderate tack and peel combined with high-shear strength
	LSE427	Outstanding performance on challenging low surface energy substrates. Bonds well to plastics, foams and rubber surfaces.
	MR280	Low tack acrylic adhesive, designed for applications that require clean removability.

Acrylic Adhesives									Rubber Adhesives			
	HTA-410	LSE-427	HSA-440	MP-481	LS55	LV-820	HBA724	LV-840	MP-555	XT-593	Arctic MX10	FBR-899
	+++	+++	++	++	+++	+++	+++	++	+++	++++	+++	+++
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Carriers - Component on which the adhesive is coated.

Polyester High tensile strength film, provides excellent chemical barrier to most migratory chemicals.

Foam Used for gap filling between two surfaces, general bonding and mounting. Highly conformable.

Polypropylene Film Opaque white polypropylene is an excellent choice for graphic mounting.

Liners - Critical for production, processing and die cutting of the PSA.

Densified Kraft

60# SCK Economical, can be kiss cut or die cut. High tensile strength for good web processing

80# SCK Used when additional thickness is needed for a particular die cutting process. Easier to handle.

Polycoated Kraft

72# PCK Feature high tensile strength, humidity resistance and is excellent for rotary die cutting.

81# Natural PCK Natural brown liner, excellent moisture stability, thicker for kiss-cutting and steel rule die cutting.

Polycoated Board

12pt Kraft Board Features higher thickness and stiffness, better for steel rule die set up and can be easily handled by the end user.

Film

Polyester (PET) High tensile strength, humidity resistant and able to be rotary die cut and kiss cut.

Release Coating - Applied to the liner, allows the PSA to separate from the liner without contaminating the adhesive.

FBR899 - Rubber Tapes



Our most versatile rubber adhesive with exceptional tack and good peel & shear strength. Excellent choice for foam bonding applications, low surface energy substrates, textiles, textured surfaces and corrugated materials.

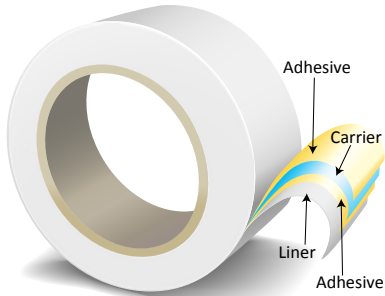
Physical Properties	Typical Values
Application Temperature	50°F
Service Temperature	0°F to 160°F (-18°C to 71°C)
Humidity & Moisture Resistance	++++
Peel & Tack	++++
Shear Strength/Creep Resistance	++
Chemical Resistance	-
Foam Bonding	PEU, XLPE, EPE, LDPE
UHMW	++++

Download our full foam bonding guide at
www.mactac.com/TResources

Appliance/White Goods 	Noise & Vibration Reduction
	Wire and Cable wrapping
	Insulation
	Gaskets
	Packaging & Protection
Automotive 	NVH
	Seat Assembly
	Wire Harness & Cable Wrapping
	Headliners
	Gaskets & Seals
	Interior Carpet
	Door Trim
Building & Construction 	Pillars
	Window & Door
	Flashing Systems
	Fenestration
	Carpet & Flooring
	Insulation
	HVAC
	Office Partitions & Soundproofing
	General Mounting
	Furniture Assembly
Industrial & Fabrication 	Architectural Panels & Trim
	Gaskets
	Foam Bonding
	Seals
	Specialty Packaging
	Label Adhesives
Transportation & Recreational Vehicles 	Converted Parts
	NVH
	Lightweighting
	LSE Bonding
	Assembly



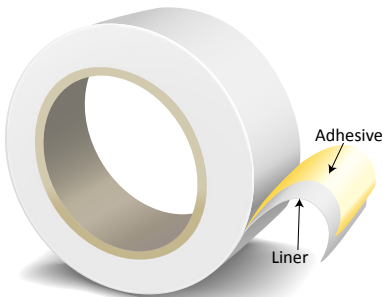
FBR899 - Rubber Tapes



Double-Coated Tapes

Construction								Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils		Caliper Mils	Liner	End Use	Width	Length		
			Liner	Unwind	Carrier & Adhesive		Release				
IB1120-60W60	.5mil PET	FBR899	1.2	1.2	2.9	60# White SCK	Medium	60"	750'	0.35	S
IB1122-60*	.5 mil PET	FBR899	2.0	2.0	4.5	60# White SCK	Tight	60"	750'	0.37	S
IB1122-60ER	.5 mil PET	FBR899	2.0	2.0	4.5	60# White SCK	Medium/ Easy	60"	750'	0.37	S
IB1122-80W60	.5mil PET	FBR899	2.0	2.0	4.5	80# White SCK	Medium	60"	750'	0.38	S
IB1122-12PT	.5mil PET	FBR899	2.0	2.0	4.5	12pt Board	Medium	54"	750'	0.47	M

* Available in 60" x 750' pre-slit rolls for same day/next day shipment.



Transfer Adhesives

Construction							Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils	Caliper Mils	Liner	End Use	Width	Length		
				Liner & Adhesive		Release				
IF1023-80	NA	FBR899	2.6	8.3	80# SCK	Medium	60"	540'	0.33	S

XT - Rubber Tapes



High performance rubber adhesive with an excellent combination of peel, tack and shear properties. Bonds well to low surface energy materials, firm foam & rubber materials and flexible magnets.

Physical Properties	Typical Values
Application Temperature	50°F
Service Temperature	0°F to 180°F (-18°C to 82°C)
Humidity & Moisture Resistance	++++
Peel & Tack	++++
Shear Strength/Creep Resistance	++++
Chemical Resistance	-
Foam Bonding	EPDM, Neoprene, Nitrile-PVC, XLPE
UHMW	++++

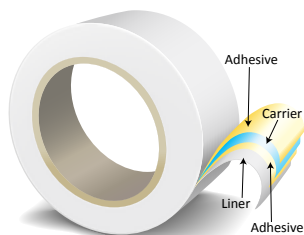


Mactac is the first BioPreferred pressure-sensitive adhesive manufacturer recognized by the USDA.

Learn more at
www.mactac.com/tape-sustainability

Abrasives & Polishing 	Woodworking Pads
Appliance/White Goods 	Noise & Vibration Reduction Wire and Cable wrapping Insulation Gaskets Packaging & Protection
Automotive 	NVH Seat Assembly Wire Harness & Cable Wrapping Headliners Gaskets & Seals Interior Carpet Door Trim Pillars
Building & Construction 	Window & Door Fenestration Carpet & Flooring Insulation HVAC Office Partitions & Soundproofing General Mounting Furniture Assembly Architectural Panels & Trim
Industrial & Fabrication 	Gaskets Foam Bonding Seals Specialty Packaging Label Adhesives Sound Dampening Converted Parts
Sign & Display 	POP Displays Plaques Nameplates & Signs Mounting & Bonding Temporary displays Promotional Items
Transportation & Recreational Vehicles 	NVH Lightweighting LSE Bonding Assembly

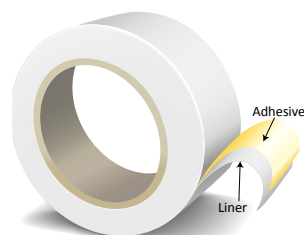
XT - Rubber Tapes



Double-Coated Tapes

Construction								Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils		Caliper Mils	Liner	End Use	Width	Length		
			Liner	Unwind	Carrier & Adhesive		Release				
IB1111XT	.5mil PET	XT Rubber	2.0	2.0	4.5	60# White SCK	Medium	54"	750'	0.37	S
IB1175XT/W60	.5mil PET	XT Rubber	2.0	2.0	4.5	80# White SCK	EZ Release	54" or 60"	750'	0.38	S
IB1175XTL12	.5mil PET	XT Rubber	2.0	2.0	4.5	12pt Board	Medium	54" or 60"	750'	0.47	S
IB1178XT*	.5mil PET	XT Rubber	1.2	1.2	2.9	60# White SCK	Medium	54"	750'	0.35	S
IB1178XTPK	.5mil PET	XT Rubber	1.2	1.2	2.9	72# White PCK	Medium	54"	750'	0.36	S
IB1182XT*	.5mil PET	XT Rubber	1.2	1.2	2.9	60# White SCK	Medium	54"	750'	0.35	S
IB1183XT/W60	.5mil PET	XT Rubber	2.0	2.0	4.5	80# White SCK	Medium	54" or 60"	750'	0.38	S
IB1184XTW60	.5mil PET	XT Rubber	2.6	2.6	5.7	80# White SCK	Medium	60"	750'	0.41	S
IB1185XTL12	.5mil PET	XT Rubber	2.0	2.0	4.5	12pt Board	Medium	54"	750'	0.47	S
IB1188XT	.5mil PET	XT Rubber	2.0	2.0	4.5	80# White SCK	Medium	54"	750'	0.38	S
IB1190XT/W60*	.5mil PET	XT Rubber	2.0	2.0	4.5	60# White SCK	Medium	54" or 60"	750'	0.37	S
IB1190XTP2	.5mil PET	XT Rubber	2.0	2.0	4.5	2.0 mil PET	Medium	60"	750'	0.38	S
IB1200XTW60	.5mil PET	XT Rubber	2.6	2.6	5.7	80# White SCK	Medium	60"	750'	0.41	S
IB1444XT	2.6 mil White PP	XT Rubber	1.2	1.2	5.0	72# PCK	Medium	54	750'	0.39	S

*Available in full web x 750' pre-slit rolls for same day or next day shipment.



Transfer Adhesives

Construction							Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils	Caliper Mils	Liner	End Use	Width	Length		
				Adhesive & Liner		Release				
IF1011-78	NA	XT Rubber	1.8	6.5	78# SCK	Medium	60"	540'	0.31	S
IF1013-78	NA	XT Rubber	2.6	8.3	78# SCK	Medium	60"	540'	0.33	S

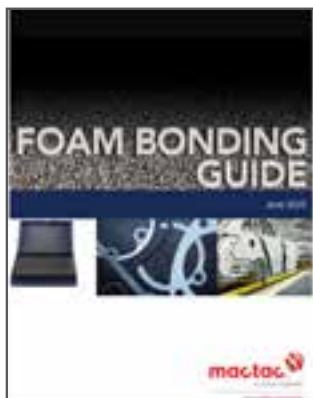
See index for automotive and regulatory specifications.

FBT Differential Rubber Tapes



Differential tape series that blends the foam bonding performance of FBR899 (unwind side) with the high performance of XT (liner side) for bonding to smooth surfaces and low surface energy materials.

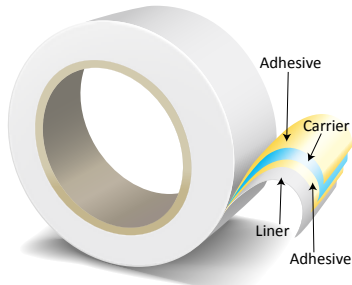
Physical Properties	Typical Values
Application Temperature	50°F
Service Temperature	0°F to 160°F (-18°C to 71°C)
Humidity & Moisture Resistance	++++
Peel & Tack	++++
Shear Strength/Creep Resistance	+++
Chemical Resistance	-
Foam Bonding	PU, XLPE, EPE, LDPE
UHMW	++++



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www.mactac.com/TResources

Appliance/White Goods 	Noise & Vibration Reduction
	Wire and Cable wrapping
	Insulation
	Gaskets
	Packaging & Protection
Automotive 	NVH
	Wire Harness & Cable Wrapping
	Instrumental Panel
	Headliners
	Gaskets & Seals
	Interior Carpet
	Door Trim Pillars
Building & Construction 	Window & Door
	Fenestration
	Carpet & Flooring
	Insulation
	HVAC
	Office partitions & soundproofing
	General Mounting
	Furniture Assembly
	Architectural Panels & Trim
Industrial & Fabrication 	Gaskets
	Foam Bonding
	Seals
	Specialty Packaging
	Label Adhesives
	Dispenser & Fixture Mounting Converted Parts
Sign & Display 	Mounting signs
	POP Displays
	Plaques
	Mounting & Bonding
	Temporary displays Promotional Items
Transportation & Recreational Vehicles 	NVH
	Lightweighting
	LSE Bonding
	Assembly

FBT Differential Rubber Tapes



Double-Coated Tapes

Construction									Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive		Coat Weight Mils		Caliper Mils	Liner	End Use	Width	Length		
		Liner	Unwind	Liner	Unwind	Carrier & Adhesive		Release				
FBT360W60	.5mil PET	XT Rubber	FBR899	1.2	1.8	3.5	60# White SCK	Medium	60"	750'	0.33	S
FBT360W54	.5mil PET	XT Rubber	FBR899	1.2	1.8	3.5	60# White SCK	Medium	54"	750'	0.33	S
FBT380W60	.5mil PET	XT Rubber	FBR899	1.2	1.8	3.5	80# White SCK	Medium	60"	750'	0.34	S
FBT380W54	.5mil PET	XT Rubber	FBR899	1.2	1.8	3.5	80# White SCK	Medium	54"	750'	0.34	S




See page 42 for automotive and regulatory specifications.

Cold Temperature Tapes

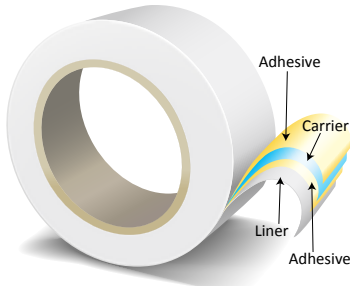


Aggressive Rubber-Based Adhesive with a minimum application temperature of -10F/-23C. Designed to perform on damp, cold surfaces.

Physical Properties	Typical Values
Application Temperature	-10°F (-23°C)
Service Temperature	-65F to 150F (-54C to 65.5C)
Humidity & Moisture Resistance	++++
Peel & Tack	+++
Shear Strength/Creep Resistance	++
Chemical Resistance	-
Foam Bonding	EPDM, Nitrile-PVC, ECH, PU, XLPE
UHMW	++++

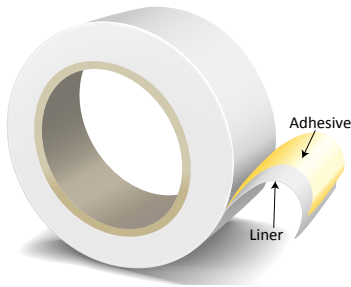
Building & Construction 	Window & Door
	Flashing Systems
	Fenestration
	Insulation
Industrial & Fabrication 	Gaskets
	Foam Bonding
	Seals
	Specialty Packaging
	Label Adhesives
Sign & Display 	Sound Dampening
	Freezer Plaques
	Refrigeration Signage
	Cold Storage Marking

Cold Temperature Tapes



Double-Coated Tapes

Construction								Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils		Caliper Mils	Liner	End Use	Width	Length		
			Liner	Unwind			Carrier & Adhesive				
ARTX1161	.5mil PET	Arctic MX10	1.5	1.5	3.5	72# White PCK	Medium	60"	750'	0.33	S
ARTX1162	.5mil PET	Arctic MX10	2.0	2.0	4.5	72# White PCK	Medium	60"	750'	0.35	S



Transfer Adhesives




Construction							Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils	Caliper Mils	Liner	End Use	Width	Length		
				Liner & Adhesive		Release				
ARTX1062	NA	Arctic MX10	2.0	6.4	80# White SCK	Medium	60"	540'	0.33	M

Ultra 555 - High Shear Tapes



Unique rubber based adhesive with exceptional cohesive strength. Ultra555 resists creep, exhibits superior holding power and offers excellent performance on low surface energy materials.

Physical Properties	Typical Values
Application Temperature	50°F
Service Temperature	0°F to 190°F (-18°C to 88°C)
Humidity & Moisture Resistance	++++
Peel & Tack	++++
Shear Strength/Creep Resistance	++++
Chemical Resistance	-

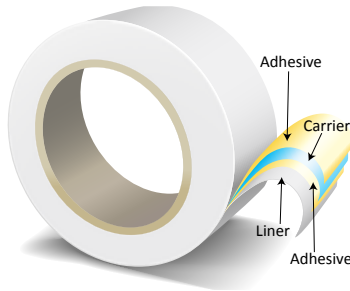
Building & Construction 	Window & Door
	Fenestration
	Insulation
	Office partitions & soundproofing
	General Mounting
	Furniture Assembly
Industrial & Fabrication 	Architectural Panels & Trim
	Gaskets
	Foam Bonding
	Seals
	Dispenser & Fixture Mounting
Sign & Display 	Converted Parts
	Mounting signs
	POP Displays
	Plaques
	Nameplates & Signs
	Mounting & Bonding
	Temporary displays
	Promotional Items



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Learn more at
www.mactac.com/tape-sustainability

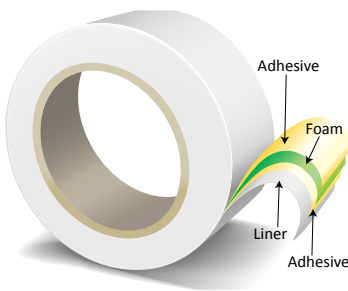
Ultra 555 - High Shear Tapes



Double Coated Film

Construction								Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils		Caliper Mils	Liner	End Use	Width	Length		
			Liner	Unwind			Carrier & Adhesive				
Double Coated Tapes											
IB8161-78	0.5 mil PET	Ultra 555	1.8	1.8	4.1	78# SCK	Medium	60"	750'	0.39	S

Ultra 555 - High Shear Mounting



Double Coated Foam






Construction								Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils		Caliper Mils	Liner	End Use	Width	Length		
			Liner	Unwind	Carrier & Adhesive		Release				
IM1763-78	1/32 White PE Foam	Ultra 555	2.6	2.6	35.25	78# SCK	Medium	60"	216'	0.39	S
IM1863-78	1/16 White PE Foam	Ultra555	2.6	2.6	66.50	78# SCK	Medium	60"	108'	0.39	S

Foam Tapes

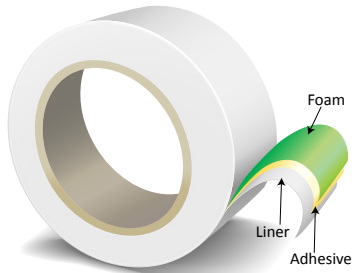


Specialty foam tapes for a wide variety of applications. Single sided tapes for packaging, seals, and protective padding. Specialty double sided tapes for applications that require removability on side like tradeshow exhibits, carpet padding and promotional displays.

Physical Properties	SC Foam	Permanent DS	Permanent/ Removable
Application Temperature	50°F	50F	50F
Service Temperature	0°F to 180°F (-18°C to 82°C)	0°F to 180°F (-18°C to 82°C)	0°F to 180°F (-18°C to 82°C)
Humidity & Moisture Resistance	++++	++++	++++
Peel & Tack	++++	++++	Perm ++++/Remove - or +
Shear Strength/Creep Resistance	++	++	+++
Chemical Resistance	++++	++++	++++

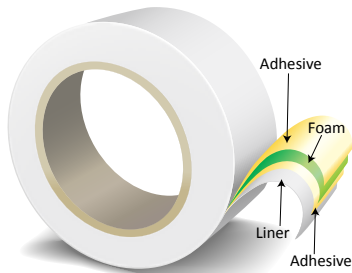
Appliance/White Goods 	Noise & Vibration Reduction
	Wire and Cable wrapping
	Insulation
	Gaskets
	Packaging & Protection
Building & Construction 	Window & Door Fenestration
	Insulation
	HVAC
	Office partitions & soundproofing
	General Mounting
	Furniture Assembly
Industrial & Fabrication 	Architectural Panels & Trim
	Gaskets
	Foam Bonding
	Seals
	Specialty Packaging
	Label Adhesives
Sign & Display 	Sound Dampening
	Converted Parts
	Mounting signs
	POP Displays
	Plaques
Transportation & Recreational Vehicles 	Nameplates & Signs
	Mounting & Bonding
	Temporary displays
	Promotional Items
	NVH
	Lightweighting
	LSE Bonding
	Assembly

Foam Tapes



Single Coated Foam

WHITE FOAM	Construction					Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils	Caliper Mils	Liner	Width	Length		
			Liner	Carrier & Adhesive					
SF4732-96	1/32"	410 Acrylic	2.0	33.25	96# PCK	60"	216'	0.43	S
SF4832-96	1/16"	410 Acrylic	2.0	64.50	96# PCK	60"	108'	0.47	S
SF4832-60	1/16"	410 Acrylic	2.0	64.50	60# SCK	60"	216'	0.47	S



Specialty Double Sided Foam

SPECIALTY PERMANENT	Construction					Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive		Caliper Mils	Liner	Width	Length		
		Liner	Unwind	Carrier & Adhesive					
IM6931-60W60	1/32" White	410 Acrylic	899 Rubber	35.25	60# SCK	60"	216'	0.43	S
IM6831-60W60	1/16" White	410 Acrylic	899 Rubber	66.50	60# SCK	60"	108'	0.47	S

PERMANENT/ REMOVABLE	Construction						Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils		Caliper Mils	Liner	Width	Length		
			Liner	Un-wind	Carrier & Adhesive					
IM5931-80W60	1/32" White Foam	Perm/Remove	0.8	1.8	33.85	83# White SCK	60"	216'	0.49	S
IM5831-80W60	1/16" White Foam	Perm/Remove	0.8	1.8	65.10	83# White SCK	60"	108'	0.60	S

Double Coated Foam Tapes








High performance rubber adhesives with an excellent combination of peel, tack and shear properties. Bonds well to low surface energy materials, firm foam & rubber materials and flexible magnets.

Physical Properties	Typical Values
Application Temperature	50°F
Service Temperature	0°F to 180°F (-18°C to 82°C)
Humidity & Moisture Resistance	++++
Peel & Tack	++++
Shear Strength/Creep Resistance	++++
Chemical Resistance	-

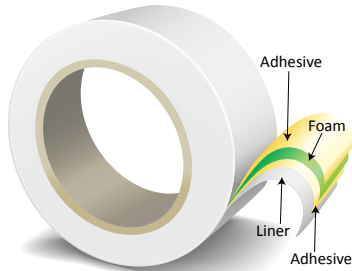


Mactac is the first BioPreferred pressure-sensitive adhesive manufacturer recognized by the USDA.

Learn more at
www.mactac.com/tape-sustainability

Appliance/White Goods 	Noise & Vibration Reduction
	Wire and Cable wrapping
	Insulation
	Gaskets
	Packaging & Protection
Building & Construction 	Window & Door
	Fenestration
	Insulation
	HVAC
	Office partitions & soundproofing
	General Mounting
Industrial & Fabrication 	Furniture Assembly
	Architectural Panels & Trim
	Gaskets
	Foam Bonding
	Seals
	Specialty Packaging
Sign & Display 	Label Adhesives
	Sound Dampening
	Converted Parts
	Mounting signs
	POP Displays
	Plaques
Transportation & Recreational Vehicles 	Nameplates & Signs
	Mounting & Bonding
	Temporary displays
	Promotional Items
	NVH
	Lightweighting
	LSE Bonding
	Assembly

Double Coated Foam Tapes



Double Coated Foam

WHITE FOAM	Construction						Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils		Caliper Mils	Liner	Width	Length		
			Liner	Unwind	Carrier & Adhesive					
IM1800XTW60	1/32" White PE Foam	XT Rubber	2.6	2.6	36.45	81# Brown PCK	60"	216'	0.49	S
IM1810XTW60	1/16" White PE Foam	XT Rubber	2.6	2.6	67.70	81# Brown PCK	60"	108'	0.60	S
IM1830XTW60	1/16" White PE Foam	XT Rubber	2.6	2.6	67.70	83# White SCK	60"	108'	0.60	M
IM1900XTW60	1/32" White PE Foam	XT Rubber	1.8	1.8	34.85	83# White SCK	60"	216'	0.49	S
IM1930XTW60	1/16" White PE Foam	XT Rubber	1.8	1.8	66.10	83# White SCK	60"	108'	0.60	S
IM1940XTW60	1/8" White PE Foam	XT Rubber	1.8	1.8	128.60	78# White SCK	60"	108'	0.60	S

BLACK FOAM	Construction						Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils		Caliper Mils	Liner	Width	Length		
			Liner	Unwind	Carrier & Adhesive					
IM1700XTW60	1/32" Black PE Foam	XT Rubber	1.8	2.2	35.25	83# White SCK	60"	216'	0.49	S
IM1730XTW60	1/16" Black PE Foam	XT Rubber	1.8	2.2	66.50	83# White SCK	60"	108'	0.60	S
IM1740XTW60	1/8" Black PE Foam	XT Rubber	1.8	1.8	129.00	78# White SCK	60"	108'	0.60	M







HTA410 - High Tack Acrylic Tapes



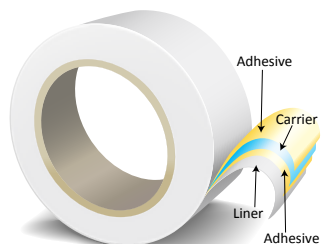
Aggressive acrylic adhesive with high tack and peel. Excellent choice for bonding to medium to high surface energy materials, foam bonding including PU foams, insulation materials and bonding to textiles and textured surfaces.

Physical Properties	Typical Values
Application Temperature	50°F
Service Temperature	-40°F to 300°F (-40°C to 149°C)
Humidity & Moisture Resistance	+++
Peel & Tack	++++
Shear Strength/Creep Resistance	+
Chemical Resistance	+++
Plasticizer Resistance	++++
Foam Bonding	PU, Poron, EPDM, Nitrile PVC
UHMW	++++
Textiles & Fabrics	++++
PH Neutral	✓

* Download our full foam bonding guide at mactac.com/TResources

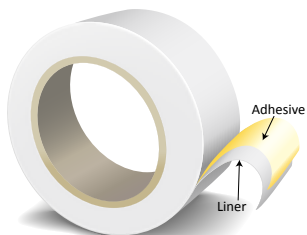
Appliance/White Goods 	Noise & Vibration Reduction
	Wire and Cable wrapping
	Insulation
	Membrane Switches
	Name Plates
	Gaskets
	Packaging & Protection
Automotive 	NVH
	Heat Shield
	Exterior Trim
	Seat Assembly
	Wire Harness & Cable Wrapping
	Headliners
	Gaskets & Seals
	Interior Carpet
	Door Trim
Building & Construction 	Pillars
	Window & Door
	Fenestration
	Insulation
	HVAC
	Office partitions & soundproofing
	General Mounting
Industrial & Fabrication 	Furniture Assembly
	Architectural Panels & Trim
	Gaskets
	Foam Bonding
	Seals
	Specialty Packaging
	Label Adhesives
Sign & Display 	Sound Dampening
	Converted Parts
	Mounting Signs
	POP Displays
	Plaques
	Nameplates & Signs
	Mounting & Bonding
Transportation & Recreational Vehicles 	Temporary Displays
	Promotional Items
	NVH
	Lightweighting
	Heat Resistance
	LSE Bonding
	Chemical Resistance
	Assembly

HTA410 - High Tack Acrylic Tapes



Double-Coated Tapes

Construction								Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils		Caliper Mils	Liner	End Use	Width	Length		
			Liner	Unwind	Carrier & Adhesive		Release				
IB4130-60	.5mil PET	HTA410	1.2	1.2	2.9	60# SCK	Medium	54"	750'	0.32	M
IB4130-72	.5 mil PET	HTA410	1.2	1.2	2.9	72# PCK	Medium	54"	750'	0.33	S
IB4131-72	.5 mil PET	HTA410	1.8	1.8	4.1	72# PCK	Medium	54"	750'	0.38	S
IB4132-72	.5mil PET	HTA410	2.4	2.4	5.3	72# PCK	Medium	54"	750'	0.46	S
IB4130-80	.5mil PET	HTA410	1.2	1.2	2.9	80# NT PCK	Medium	54"	750'	0.33	M
IB4131-80	.5mil PET	HTA410	1.8	1.8	4.1	80# NT PCK	Medium	54"	750'	0.38	M
IB4132-80	.5mil PET	HTA410	2.4	2.4	5.3	80# NT PCK	Medium	54"	750'	0.46	S
IB4432-72	2.6 mil White PP	HTA410	2.4	2.4	7.4	72# PCK	Medium	54"	750'	0.51	S




Transfer Adhesives









Construction							Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils	Caliper Mils	Liner	End Use	Width	Length		
				Liner & Adh		Release				
Single Liner Transfer Adhesives										
IF4032-60W60	NA	HTA410	2.0	5.5	60# SCK	Medium	60"	540'	0.26	S
IF4032-72	NA	HTA410	2.0	7.8	72# PCK	Medium	54" or 60"	540'	0.32	S/M
IF4033-72	NA	HTA410	3.0	7.8	72# PCK	Medium	54" or 60"	540'	0.33	S/M
IF4034-72	NA	HTA410	4.0	9.8	72# PCK	Medium	54" or 60"	540'	0.35	S/M
IF4032-80	NA	HTA410	2.0	8.1	80# NT PCK	Medium	54"	540'	0.33	M
IF4033-80W60	NA	HTA410	3.0	9.1	80# NT PCK	Medium	60"	540'	0.35	S
IF4034-80W60	NA	HTA410	4.0	10.1	80# NT PCK	Medium	60"	540'	0.39	S
Double Liner Transfer Adhesives										
IF4032-2PET	NA	HTA410	2.0	5.2	1.2/2.0 PET	Medium	60"	540'	0.25	M

HSA440 - High Strength Acrylic Tapes

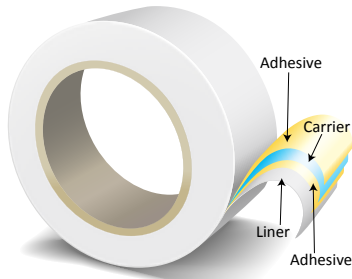


Versatile acrylic adhesive with an excellent balance of peel, tack and shear. Performs well on medium to high surface energy materials, excellent temperature and humidity resistance.

Physical Properties	Typical Values
Application Temperature	50°F
Service Temperature	-40°F to 325°F (-40°C to 163°C)
Humidity & Moisture Resistance	++++
Peel & Tack	+++
Shear Strength/Creep Resistance	+++
Chemical Resistance	+++
Plasticizer Resistance	++++
UHMW	++
PH Neutral	✓
 File MH12627 UL969 & CSA 22.2 No. 15 Recognized	Indoor & Outdoor Applications

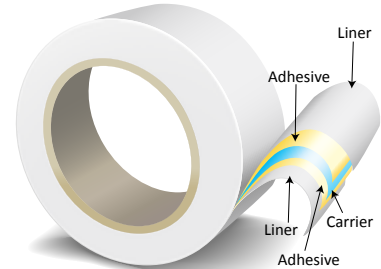
Appliance/White Goods 	Noise & Vibration Reduction
	Wire and Cable wrapping
	Insulation
	Membrane Switches
	Name Plates
	Gaskets
Automotive 	Packaging & Protection
	NVH
	Heat Shield
	Exterior Trim
	Seat Assembly
	Wire Harness & Cable Wrapping
Building & Construction 	Headliners
	Gaskets & Seals
	Interior Carpet
	Door Trim
	Pillars
	Window & Door
Electronics 	Fenestration
	Insulation
	HVAC
	Office partitions & soundproofing
	General Mounting
	Furniture Assembly
Industrial & Fabrication 	Architectural Panels & Trim
	Nameplates
	Graphic Overlays
	Membrane Switches
	Damping
	Lens Bonding
Sign & Display 	Component Assembly
	Gasketing
	Gaskets
	Foam Bonding
	Seals
	Specialty Packaging
Transportation & Recreational Vehicles 	Label Adhesives
	Sound Dampening
	Converted Parts
	Mounting Signs
	POP Displays
	Plaques
Assembly 	Nameplates & Signs
	Mounting & Bonding
	Temporary Displays
	Promotional Items
	NVH
	Lightweighting
	Heat Resistance
	Chemical Resistance
	Assembly

HSA440 - High Strength Acrylic Tapes

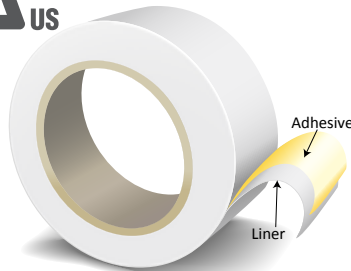


**Double-Coated/
Single Liner Tapes**

**Double-Coated/
Double Liner Tapes**

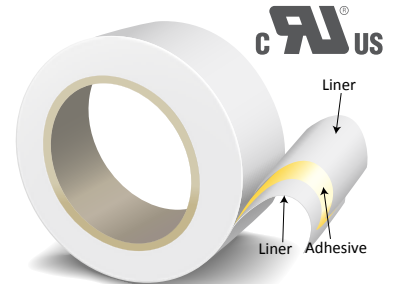


Construction								Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils		Caliper Mils	Liner	End Use	Width	Length		
			Liner	Unwind	Carrier & Adh		Release				
IB4140-72	.5 mil PET	HSA440	1.2	1.2	2.9	72# PCK	Medium	60"	750'	0.33	S
IB4142-72	.5 mil PET	HSA440	2.4	2.4	5.3	72# PCK	Medium	60"	750'	0.46	S
Double Liner Tapes											
IB4140-72L	.5 mil PET	HSA440	1.2	1.2	2.9	1.2 mil PET/ 72#PCK liner	Medium	60"	750'	0.33	S
IB4142-2PET	.5 mil PET	HSA440	1.15	1.15	2.9	1.2 mil PET/ 2.0 mil PET	Medium	60"	750'	0.34	S
IB4142-72L	.5 mil PET	HSA440	2.4	2.4	5.3	1.2 mil PET/ 72# PCK	Medium	60"	750'	0.46	S



**Transfer Adhesives/
Single Liner**

**Transfer Adhesives/
Double Liner**




Construction							Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils	Caliper Mils	Liner	End Use	Width	Length		
				Liner & Adhesive		Release				
Single Liner Transfer Adhesives										
IF4042-72	NA	HSA440	2.0	7.8	72# PCK	Medium	60"	540'	0.32	S
IF4044-72	NA	HSA440	4.0	9.8	72# PCK	Medium	60"	540'	0.35	S
Double Liner Transfer Adhesives										
IF4042-2PET	NA	HSA440	2	5.2	1.2/2.0 PET	Medium	60"	540'	0.25	S


LSE427 - Low Surface Energy Acrylic Tapes




Aggressive, modified acrylic adhesive designed for bonding to low surface energy materials and textured surfaces. Performs well on many grades of foam and rubber. Moderate shear.


Physical Properties	Typical Values
Application Temperature	50°F
Service Temperature	-40°F to 350°F (40°C to 177°C)
Humidity & Moisture Resistance	+++
Peel & Tack	+++
Shear Strength/Creep Resistance	++
Chemical Resistance	++
Plasticizer Resistance	++++
Foam Bonding	Poron, EPDM, Nitrile PVC, SBR, Ester PU
UHMW	++++

Appliance/White Goods 	Noise & Vibration Reduction
	Wire and Cable wrapping
	Insulation
	Membrane Switches
	Name Plates
	Gaskets
	Packaging & Protection

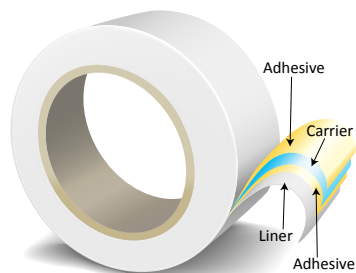
Automotive 	NVH
	Heat Shield
	Exterior Trim
	Seat Assembly
	Wire Harness & Cable Wrapping
	Headliners
	Gaskets & Seals
	Interior Carpet
	Door Trim
	Pillars

Industrial & Fabrication 	Gaskets
	Foam Bonding
	Seals
	Specialty Packaging
	Label Adhesives
	Sound Dampening
	Converted Parts

Sign & Display 	Mounting Signs
	POP Displays
	Plaques
	Nameplates & Signs
	Mounting & Bonding
	Temporary Displays
	Promotional Items

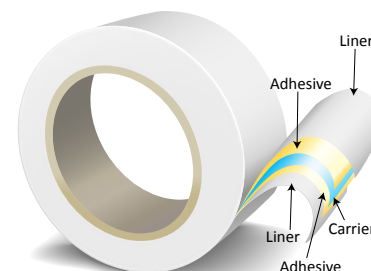
Transportation & Recreational Vehicles 	NVH
	Lightweighting
	Heat Resistance
	LSE Bonding
	Chemical Resistance
	Assembly

LSE427 - Low Surface Energy Acrylic Tapes



**Double Coated/
Single Liner Tapes**

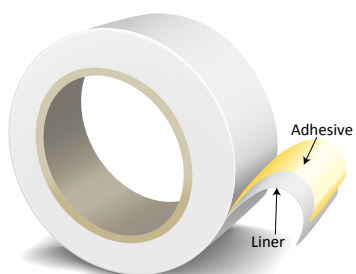
**Double Coated/
Double Liner Tapes**



Construction								Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils		Caliper Mils	Liner	End Use	Width	Length		
			Liner	Unwind	Carrier & Adh		Release				
Double Coated Tape - Single Liner											
IB4172-72	.5 mil PET	LSE427	1.8	1.8	4.1	72# PCK	Medium	54"	750'	0.36	S
Transfer Adhesive - Single Liner											
IF4072-72	NA	LSE427		2.0	7.3	72# PCK	Medium	54"	540'	0.46	S
Tissue Supported Tape - Single Liner											
IB4375-72	Tissue	LSE427		5.0	5.0	72# PCK	Medium	60"	750'	0.35	M

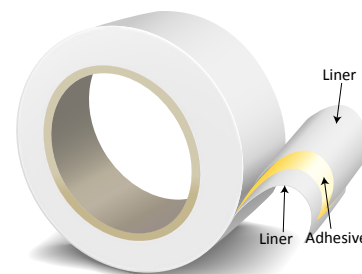
Construction							Master Roll		Weight / MSI	Stock/ MTO
Part Number	Carrier	Adhesive	Coat Weight Mils	Caliper Mils	Liner	End Use	Width	Length		
				Carrier & Adh		Release				
Double Coated Tape - Double Liner										
IB4172-72L	.5 mil PET	LSE427	1.8/1.8	4.1	1.2 mil PET/ 72#PCK	Easy Medium	54"	750'	0.41	S
Transfer Adhesive - Double Liner										
IF4072-72L	NA	LSE427	2.0	7.3	1.2 mil PET/ 72#PCK	Easy Medium	54"	750'	0.38	S

Construction							Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils	Caliper Mils	Liner	End Use	Width	Length		
				Carrier & Adh		Release				
Tissue Supported Tape - Double Liner										
IB4372-72L	Tissue	LSE427	5.0	5.0	1.2 mil PET/ 72#PCK	Easy Medium	60"	750'	0.41	M



**Transfer Adhesive
Single Liner**

**Transfer Adhesive/
Double Liner**











LS55 - Solvent Acrylic Tapes

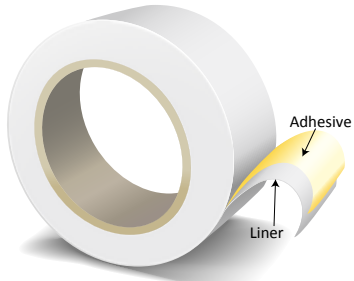


Macbond LS55 Series features a highly tackified acrylic adhesive that provides ultimate bond on low surface energy or other difficult to adhere to substrates.

Physical Properties	LS55
Application Temperature	50°F
Service Temperature	-40°F to 250°F
Humidity & Moisture Resistance	++++
Peel & Tack	++++
Shear Strength/Creep Resistance	+++
Chemical Resistance	++++
Plasticizer Resistance	+++
Foam Bonding	Nitrile PVC, EPDM, Porom, PU

Appliance/White Goods 	Noise & Vibration Reduction
	Wire and Cable wrapping
	Insulation
	Membrane Switches
	Name Plates
Building & Construction 	Gaskets
	Window & Door
	Fenestration
	Insulation
	Office partitions & soundproofing
Abrasives & Polishing 	General Mounting
	Furniture Assembly
	Architectural Panels & Trim
Automotive 	Woodworking Pads
	Ophthalmic
	Semiconductor
Automotive 	NVH
	Heat Shield
	Exterior Trim
	Wire Harness & Cable Wrapping
	Gaskets & Seals
	Interior Carpet
Transportation & Recreational Vehicles 	Door Trim
	Pillars
	NVH
	Lightweighting
	Heat Resistance
Electronics 	LSE Bonding
	Chemical Resistance
	Assembly
	Nameplates
	Graphic Overlays
Electronics 	Membrane Switches
	Damping
	Lens Bonding
	Component Assembly
	Gasketing

LS55 - Solvent Acrylic Tapes



Transfer Adhesive Single Liner

Transfer Tapes	Construction						Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils	Caliper Mils	Liner	End Use	Width	Length		
				Adhesive & Liner		Release				
IF2072-60	NA	High Tack Acrylic	2.0	5.6	60# PCK	Medium	54"	540'	.30	S
IF2074-60	NA	High Tack Acrylic	4.0	7.6	60# PCK	Medium	54"	540'	.40	S

481- Solvent Acrylic Tapes

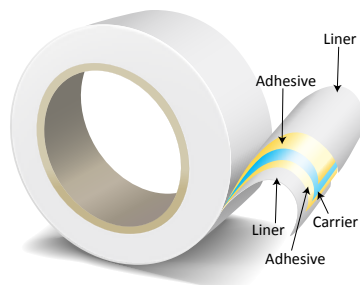


Macbond 481 Series features a high performance acrylic adhesive designed to provide high shear and ultimate bond on medium to high surface energy materials.

Physical Properties	MP481
Application Temperature	50°F
Service Temperature	-40°F to 250°F (-40°C to 121°C)
Humidity & Moisture Resistance	++++
Peel & Tack	+++
Shear Strength/Creep Resistance	++++
Chemical Resistance	++++
Plasticizer Resistance	+++
Foam Bonding	Nitrile PVC, EPDM, Poron, PU
UL Recognized	File# MH14249*

Appliance/White Goods 	Noise & Vibration Reduction
	Wire and Cable wrapping
	Insulation
	Membrane Switches
	Name Plates
Building & Construction 	Gaskets
	Window & Door
	Fenestration
	Insulation
	Office partitions & soundproofing
Abrasives & Polishing 	General Mounting
	Furniture Assembly
	Architectural Panels & Trim
Automotive 	Woodworking Pads
	Ophthalmic
	Semiconductor
Automotive 	NVH
	Heat Shield
	Exterior Trim
	Wire Harness & Cable Wrapping
	Gaskets & Seals
	Interior Carpet
Transportation & Recreational Vehicles 	Door Trim
	Pillars
	NVH
	Lightweighting
	Heat Resistance
Electronics 	LSE Bonding
	Chemical Resistance
	Assembly
	Nameplates
	Graphic Overlays
Electronics 	Membrane Switches
	Damping
	Lens Bonding
	Component Assembly
	Gasketing

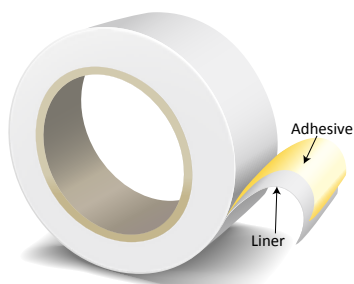
481- Solvent Acrylic Tapes



Double Coated/ Double Liner Tapes

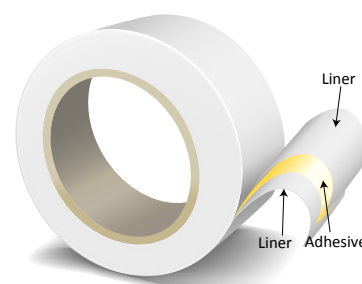
Double Coated	Construction							Master Roll		Weight / MSI	Stock/MTO	Comments
Part Number	Carrier	Adhesive	Coat Weight Mils		Caliper Mils	Liner	End Use	Width	Length			
			Liner	Unwind	Carrier & Adhesive		Release					
IB2122-290	1.0 mil PET	MP481	1.5	1.5	4.0	90#/90#	Medium	54"	750'	.28	S	
IB2322-290	3.0 mil PET	MP481	1.5	1.5	6.0	90#/90#	Medium	54"	1500'	.28	M	Roll or Sheet 10-15 Day Lead Time
IB2522-290	5.0 mil PET	MP481	1.5	1.5	8.0	90#/90#	Medium	54"	1500'	.32	M	Roll or Sheet 10-15 Day Lead Time

Transfer Tapes	Construction						Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils	Caliper Mils	Liner	End Use	Width	Length		
				Adhesive & Liner		Release				
IF2012-60*	NA	MP481	2.0	5.6	60# PCK	Medium	54"	540'	.28	S
IF2015-60	NA	MP481	5.0	8.6	60#PCK	Medium	Custom	Custom	-	M
IF2011-PET-90	NA	MP481	1.5	10.1	1.2 PET Sacrificial liner/90# PCK	Medium	54"	540'	.32	S

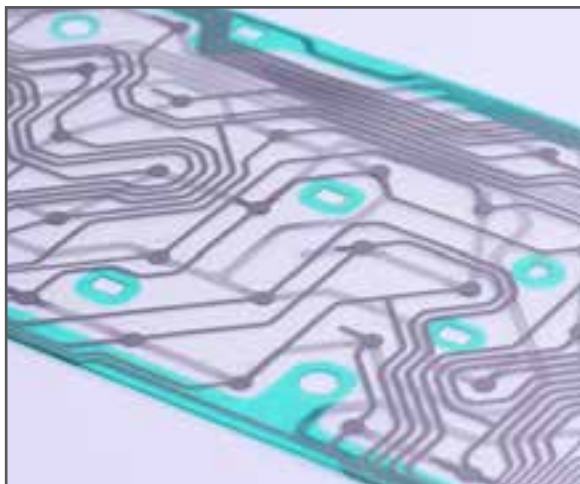


Transfer Adhesives/ Single Liner

Transfer Adhesives/ Double Liner



Solvent Acrylic Tapes

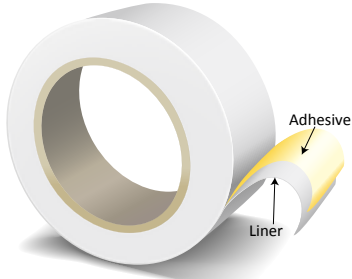


High performance acrylic tapes designed for challenging applications, that require heat, chemical and environmental resistance.

Physical Properties	HBA724
Application Temperature	50°F
Service Temperature	-40°F to 350°F (40°C to 177°C)
Humidity & Moisture Resistance	++++
Peel & Tack	+++
Shear Strength/Creep Resistance	++++
Chemical Resistance	++++
Plasticizer Resistance	++++
Foam Bonding	EPDM, Poron
UHMW	++
JIS A-1901 Compliant	✓
SAE J1756	✓
UL Recognized	

Appliance/White Goods 	Noise & Vibration Reduction
	Wire and Cable wrapping
	Insulation
	Membrane Switches
	Name Plates
Building & Construction 	Gaskets
	Window & Door Fenestration
	Insulation
	Office partitions & soundproofing
	General Mounting
Abrasives & Polishing 	Furniture Assembly
	Architectural Panels & Trim
	Woodworking Pads
Automotive 	Opthalmic
	Semiconductor
	NVH
	Heat Shield
	Exterior Trim
Transportation & Recreational Vehicles 	Wire Harness & Cable Wrapping
	Gaskets & Seals
	Interior Carpet
	Door Trim
	Pillars
Electronics 	NVH
	Lightweighting
	Heat Resistance
	LSE Bonding
	Chemical Resistance
Electronics 	Assembly
	Nameplates
	Graphic Overlays
	Membrane Switches
	Damping
Electronics 	Lens Bonding
	Component Assembly
	Gasketing

Solvent Acrylic Tapes

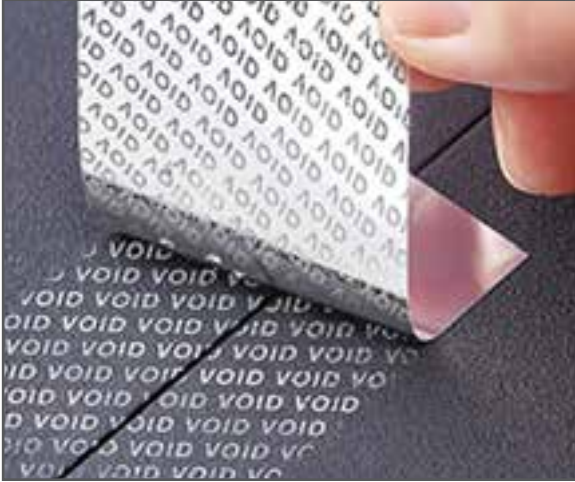


Transfer Adhesives/ Single Liner




Construction							Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils	Caliper Mils	Liner	End Use	Width	Length		
				Liner & Adhesive		Release				
Tissue Supported Tape - Single Liner										
IB7372-72	Tissue	HBA724	5.0	5.0	72# PCK	Medium	60"	750'	0.41	S



Engineered Laminates



Lintec manufactures high performance functional laminates engineered for challenging applications. Applications include durable goods, electronics, security and surface protection.

Appliance/White Goods 	Packaging & Protection
Electronics 	Nameplates Graphic Overlays Membrane Switches Damping Lens Bonding Component Assembly Gasketing
Industrial & Fabrication 	Seals Specialty Packaging Label Adhesives Converted Parts

Physical Properties	Silicone	Oil Tolerant	Security/Void	Destructible	Heat Resistant
Application Temperature	50°F	50F	+39F	+39F	50F
Service Temperature	-40°F to 212°F (-40°C to 100°C)	-40°F to 212°F (-40°C to 100°C)	-40°F to 212°F (-40°C to 100°C)	-40°F to 212°F (-40°C to 100°C)	-40°F to 212°F (-40°C to 100°C)
Peel & Tack	-	+++	++	++++	++++
Chemical Resistance	++++	++++	++++	++++	++++
Moisture Resistance	++++	++++	++++	++++	++++
Removability	++++	-	VOID Pattern or No-residue VOID	-	-
Applications	Die Cut Part Protection Surface Protection Removable Labels	Steel Labels Automotive Labels Cosmetics Labeling	Device Packaging Identification Warranty & Asset Protection Product Warning Labels	Tamper Evidence Security Seals	Circuit Boards Electronics Automotive

Engineered Laminates

Product #	Facestock	Adhesive	Liner	Width	Length	MSI	WHSE
Silicone Surface Protection Tape / Labelstock							
LTCRE505SW48	2.0 mil Clear PET	Silicone (POP)	N/A	48.0"	750'	0.28	PA
LTCRE505S48	2.0 mil Clear PET	Silicone (POP)	75# White Kraft	48.0"	750'	0.30	PA
Oily Tolerant							
LTCOT5038H	2.0 mil White Semi-Gloss PET	Oil Tolerant HCW	50# White Glassine	47.2"	2,500'	0.26	CA
Security VOID							
LTC01912	2.0 mil White Gloss VOID Polyester	P293DS	50# White Glassine	38.6"	2,500'	0.25	CA
LTC01572	1.5 mil Clear Gloss VOID Polyester	Specialty VOID	60# Blue Glassine	37.8"	2,500'	0.25	CA
Destructible							
LTC03124	2.0 mil White Satin Destructible PVC	PAT1	45# White Glassine	39.8"	2,500'	0.25	CA
Heat Resistant							
LTCHR3210-25	1.6 mil White Topcoated Polyetherimide	Heat Resistant Acrylic	65# Blue Glassine	19.3"	1,640'	0.23	JP



Interested in the full line of Lintec products? Visit www.mactac.com/RLResources.com

General Purpose Laminating Adhesives



Robust general purpose laminating adhesives, excellent for building label or laminate constructions on press, bonding to flexible magnet material or securing RFID inlays.

Industrial & Fabrication 	Gaskets
	Foam Bonding
	Seals
	Specialty Packaging
	Label Adhesives
	Flexible Magnet Laminating
	Converted Parts
Sign & Display 	Mounting Signs
	POP Displays
	Plaques
	Nameplates & Signs
	Mounting & Bonding
	Temporary Displays
	Promotional Items

Physical Properties	Typical Values
Application Temperature	25°F
Service Temperature	-75°F to 200°F (-60°C to 93°C)
Humidity & Moisture Resistance	+++
Peel & Tack	++
Shear Strength/Creep Resistance	++
Chemical Resistance	++
Plasticizer Resistance	++
Ph Neutral	✓

Double Liner	Construction					Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils	Liner	End Use	Width	Length		
					Release				
Single Liner Transfer Adhesive									
IF3091-60	NA	GP99	1.0	60# PCK	Medium	54"	540'	0.28	S
Double Liner Transfer Adhesive									
IF3051W52	NA	GP310	1.0	2.5 mil SCK 3.2 mil SCK	Medium	52"	540'	0.28	S

Surface Protection & Optical Processing Tape



Surface Protection & Optical 	Lens Grinding
	Optics Protection

Single coated polyethylene film specially designed for optical lens processing and surface protection. Adhesive is designed to provide a firm, yet cleanly removable bond to most surfaces.

Physical Properties	Typical Values
Application Temperature	+50°F
Service Temperature	-40°F to 300°F
Humidity & Moisture Resistance	++++
Peel & Tack	+
Shear Strength/Creep Resistance	++++
Chemical Resistance	++++
Plasticizer Resistance	++++
Ph Neutral	✓

Construction						Master Roll		Weight / MSI	Stock/MTO
Part Number	Facestock	Adhesive	Coat Weight Mils	Liner	End Use	Width	Length		
					Release				
Single Liner Transfer Adhesive									
OPT4321-50	Translucent Blue PE Film	MR208	1.1	50# SCK	Medium/Easy	60"	To Order	0.25	S

GS Series - The Rubber Rivet Tape - High Strength Rubber Transfer Adhesive








Specially formulated rubber adhesive designed to be coated at thickness from 5 to 50 mils. All tapes are coated in lanes to create a dry edge for ease of handling.

Benefits

- GS Series tapes provide exceptional peel, tack and shear properties.
- Gap Filler
- Third Hand for Assembly
- Moisture Barrier

Physical Properties	Typical Values
Application Temperature	50°F
Service Temperature	0°F to 180°F (-18°C to 82°C)
Humidity & Moisture Resistance	++++
Peel & Tack	++++
Shear Strength/Creep Resistance	++++
Chemical Resistance	-
Plasticizer Resistance	-
Foam Bonding	++
UHMW	++++

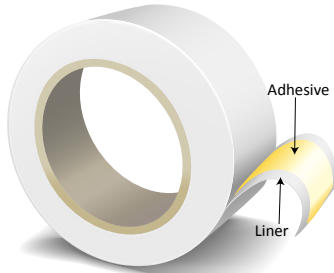
Building & Construction 	Window & Door
	Fenestration
	Insulation
	Office partitions & soundproofing
	General Mounting
	Furniture Assembly
	Architectural Panels & Trim
Automotive 	Headliners
	Gaskets & Seals
	Interior Carpet
Industrial & Fabrication 	Gaskets
	Foam Bonding
	Seals
	Specialty Packaging
	Sound Dampening
Sign & Display 	Converted Parts
	Mounting Signs
	POP Displays
	Plaques
	Nameplates & Signs
	Mounting & Bonding
	Temporary Displays
Transportation & Recreational Vehicles 	Promotional Items
	NVH
	Lightweighting
	LSE Bonding
	Assembly



Mactac is the first BioPreferred pressure-sensitive adhesive manufacturer recognized by the USDA.

Learn more at www.mactac.com/tape-sustainability

GS Series - The Rubber Rivet Tape - High Strength Rubber Transfer Adhesive



Product Details								
Part Number	Adhesive	Adhesive Caliper Mils	Adhesive Width	Liner Width	Roll Length	MOQ Rolls	Rolls/Carton	Stock/ MTO
GS1001	GS Ultra High Tack	20	1.00"	1.50"	200'	8	8	Stock
GS1003	GS Ultra High Tack	20	.50"	1.00"	200'	12	12	Stock
GS1004	GS Ultra High Tack	35	.50" (RR)	2.00"	200'	6	6	Stock
GS1007	GS Ultra High Tack	35	1.00"	1.50"	200'	8	8	Stock
GS1013	GS Ultra High Tack	20	2.00"	3.00"	200'	4	4	Stock
GS1019	GS Ultra High Tack	35	0.75"	1.50"	200'	96	8	MTO
GS1023	GS Ultra High Tack	15	1.00"	1.50"	200'	96	8	MTO
GS2123200	GS Ultra High Tack	10	2.00"	3.00"	200'	48	4	MTO
GS2145-SC	GS Ultra High Tack	10	4.00"	5.00"	1350'	16	16*	MTO
GS2003	GS Ultra High Tack	5	0.75"	1.20"	900'	30	10	MTO
GS2004	GS Ultra High Tack	5	1.00"	1.50"	900'	24	8	MTO
GS2208	GS Ultra High Tack	15	4.00"	6.00"	400'	36	2	MTO
GS2313	GS Ultra High Tack	20	1.00"	1.20"	200'	120	10*	MTO
GS2603RR	GS Ultra High Tack	35	(2) @ .75" (RR)	3.00"	200'	48	4	MTO
GS2906	GS Ultra High Tack	50	2.00"	2.40"	150'	160	10	MTO

Samples

MAC-GS1001	GS Ultra High Tack	20	1.00"	1.50"	50'
MAC-GS1007	GS Ultra High Tack	35	1.00"	1.50"	50'
MAC-GS2004	GS Ultra High Tack	5	1.00"	1.50"	50'
MAC-GS2204	GS Ultra High Tack	15	1.00"	1.50"	50'
MAC-GS2504	GS Ultra High Tack	30	1.00"	1.50"	50'

(RR) = 2 lanes of adhesive

* Packed on Pallets

- Available in 5.0 to 50 mil Thick configurations
- Adhesive widths 0.5" - 11.5"
- MTO sizes ship in 10 - 15 days
- Custom configurations are available with low minimums
- All rolls manufactured with dry edges

Low VOC Tapes



LV750 - Aggressive non-VOC hot-melt rubber adhesive with excellent peel, tack and shear properties. Superior adhesion to LSE materials such as PE, PP and TPO type materials. Bonds well to various types of foams and rubber extrusions


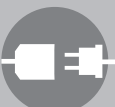



LV820 - Aggressive non-VOC, low outgassing & low migration acrylic adhesive with excellent peel and tack properties. Bonds well to open celled materials, textiles, textured materials and medium-high surface energy substrates.

LV840 - High temperature non-VOC, low outgassing & low migration acrylic adhesive with good peel, tack and shear properties. Good die cutting properties and cold flow resistance. Good adhesion to medium-high surface energy materials

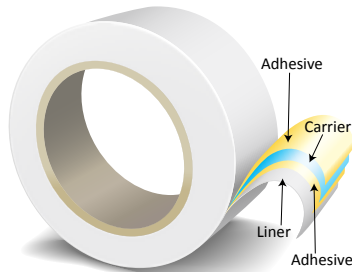
LV860 - Low surface energy, non-VOC modified acrylic adhesive with excellent peel & tack properties. Bonds well to LSE plastics and surfaces including certain silicone foams.

Physical Properties	Typical Values			
	LV750	LV820	LV840	LV860
Application Temperature	50°F	50°F	50°F	50°F
Service Temperature	40°F to 180°F (-40°C to 82°C)	-40°F to 300°F (-40°C to 149°C)	-40°F to 325°F (-40°C to 163°C)	40°F to 300°F (-40°C to 149°C)
Humidity & Moisture Resistance	++++	+++	+++	+++
Peel & Tack	++++	++++	+++	++++
Shear Strength/ Creep Resistance	++++	+	+++	++
Chemical Resistance	+	+++	++++	+++
Plasticizer Resistance	-	++++	++++	+++
JIS A-1901 Compliant		✓	✓	
PH Neutral		✓	✓	

For the most current information please visit mactac.com.

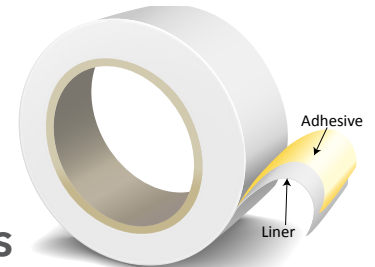
Battery/ E-Mobility 	Automotive
	Bonding
	Busbars
	Cell Wrapping
	Cushioning & Dapening
	Electrical Indulation
	EMI & RF Shielding
	Pack Sealing & Gasketing
	PCK & Flexible Circuit
	Thermal Runaway Protection
	Thermal Interface
Electronics 	Flexible Circuits
	PCB
	Spacer Tapes
	Nameplates
	Graphic Overlays
	Membrane Switches
	BLU Assembly
	Damping
	Lens Bonding
	Component Assembly
	Gasketing
Appliance/White Goods 	Noise & Vibration Reduction
	Wire and Cable wrapping
	Insulation
	Membrane Switches
	Name Plates
	Gaskets
	Packaging & Protection
Automotive 	NVH
	Heat Shield
	Exterior Trim
	Seat Assembly
	Wire Harness & Cable Wrapping
	Headliners
	Gaskets & Seals
	Interior Carpet
	Door Trim
	Pillars
Transportation & Recreational Vehicles 	NVH
	Lightweighting
	Heat Resistance
	LSE Bonding
	Chemical Resistance
	Assembly

Low VOC Tapes



Double-Coated Tapes

Transfer Adhesives



Construction									Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhe- sive	Coat Weight Mils		Caliper Mils	Liner	End Use	Minimum Breakdown Voltage (kVAC)	Width	Length		
			Liner	Unwind	Carrier & Adhesive		Release					
Double-Coated Tapes												
CB1100-60	.5 mil PET	LV750	1.2	1.2	2.9	60# SCK	Medium	3.5	54"	750'	.35	S
CB1100-72						72# PCK	Medium				.36	S
CB1102-60	.5 mil PET	LV750	2.0	2.0	4.5	60# SCK	Medium	4.0	54"	750'	.37	S
CB1102-80						72# PCK	Medium				.38	S
CB1102-12						12pt	Medium				.41	S
CB4161-72	.5 mil PET	LV860	1.8	1.8	4.1	72# PCK	Medium	3.5	54"	750'	.36	S
CB4180-72	.5 mil PET	LV820	1.2	1.2	2.9	72# PCK	Medium	2.5	54"	750'	0.33	S
CB4180-80	.5 mil PET	LV820	1.2	1.2	2.9	80# NT PCK	Medium		54"	750'	0.33	M
CB4181-72	.5 mil PET	LV820	1.8	1.8	4.1	72# PCK	Medium	3.25	54"	750'	0.38	S
CB4182-72	.5 mil PET	LV820	2.4	2.4	5.3	72# PCK	Medium	3.5	54"	750'	0.46	S
CB4182-80						80# NT PCK						
CB4190-72	.5 mil PET	LV840	1.2	1.2	2.9	72# PCK	Medium	3.25	60"	540'	0.33	S
CB4190-2PET						2.0 mil PET						
CB4192-72	.5 mil PET	LV840	2.4	2.4	5.3	72# PCK	Medium	3.25	60"	540'	0.38	S

Construction							Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils	Caliper Mils	Liner	End Use	Width	Length		
				Liner & Adh		Release				
Single Liner Transfer Adhesives										
CF1091-78	NA	LV750	1.8	6.5	78# SCK	Medium	54"	540'	.31	S
CF1093-78	NA	LV750	2.6	8.3	78# SCK	Medium	54"	540'	.33	S
CF4062-72	NA	LV860	2.0	9.8	72# SCK	Medium	54"	540'	.46	S
CF4082-72	NA	LV820	2.0	7.8	72# PCK	Medium	54"	540'	0.32	S
CF4082-80	NA	LV820	2.0	8.1	80# NT PCK	Medium	54"	540'	0.33	M
CF4083-72	NA	LV820	3.0	8.8	72# PCK	Medium	54"	540'	0.33	S
CF4083-80	NA	LV820	3.0	9.1	80# NT PCK	Medium	60"	540'	0.35	S
CF4084-72	NA	LV820	4.0	9.8	72# PCK	Medium	54"	540'	0.35	S
CF4084-80	NA	LV820	4.0	10.1	80# NT PCK	Medium	60"	540'	0.39	S
CF4092-72	NA	LV840	2.0	7.8	72# PCK	Medium	60"	540'	0.32	S
CF4094-72	NA	LV840	4.0	9.8	72# PCK	Medium	60"	540'	0.35	S

Differential Double Coated Tapes



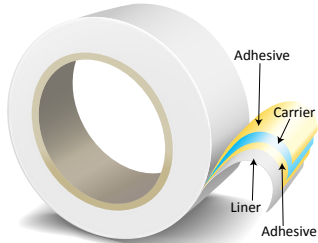
Permanent/Removable options include IB5121-72W60, IB5131-72W60 and IB5161-72W60. This product line features either XT rubber or FBR 899 on the exposed side to provide aggressive bond to foams or rigid materials. A low tack or aggressive removable acrylic adhesive are available depending on the level of adhesion required.

Permanent/Permanent features an XT rubber on the exposed side with an aggressive acrylic adhesive on the other side. This combination provides an excellent choice for bonding foams or rigid materials and medium to high surface energy materials including PU foams, textiles and textured surfaces.

Physical Properties	Typical Values Low Tack	Typical Values Aggressive Rem.
Application Temperature	50°F	
Service Temperature	-40°F to 180°F (-40°C to 82°C)	
Peel & Tack	-	+
Shear Strength/Creep Resistance	++	++++
Chemical Resistance	++++	++++
Plasticizer Resistance	++++	++++

Appliance/White Goods 	Noise & Vibration Reduction
	Wire and Cable wrapping
	Insulation
	Membrane Switches
	Name Plates
	Gaskets
Building & Construction 	Packaging & Protection
	Window & Door
	Fenestration
	Insulation
	HVAC
	Office partitions & soundproofing
Abrasives & Polishing 	General Mounting
	Furniture Assembly
	Architectural Panels & Trim
Woodworking Pads 	Ophthalmic
	Semiconductor
Industrial & Fabrication 	Gaskets
	Foam Bonding
	Seals
	Specialty Packaging
	Label Adhesives
	Sound Dampening
Sign & Display 	Converted Parts
	Mounting Signs
	POP Displays
	Plaques
	Nameplates & Signs
	Mounting & Bonding
	Temporary Displays
	Promotional Items

Differential Double Coated Tapes



Double Coated Tapes

Construction								Master Roll		Weight / MSI	Stock/MTO
Part Number	Carrier	Adhesive	Coat Weight Mils		Caliper Mils	Liner	End Use	Width	Length		
			Liner	Unwind	Carrier & Adh		Release				
Permanent/Removable Adhesives											
IB5121-72W60	.5 mil PET	XT/Low Tack Acrylic	1	1.2	2.7	72# PCK	Medium	60"	750'	0.33	S
IB5131-72W60	.5 mil PET	XT/Aggressive Removable	0.8	1.8	3.1	72# PCK	Medium	60"	750'	0.33	S
IB5161-72W60	.5 mil PET	FBR899/Low Tack Acrylic	1	2	3.5	72# PCK	Medium	60"	750'	0.35	S
Permanent/Permanent Adhesives											
IB6132-72W60	.5 mil PET	XT / HTA410	1.5	1.8	4.1	72# PCK	Medium	60"	750'	0.39	S
IB6132L12	.5 mil PET	XT/ HTA410	1.8	1.8	4.1	12pt	Medium	60"	750'	0.39	M



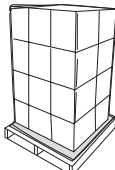

Service Program

How to Order

Mactac Customer Service Contact Information	
Email	performanceadhesives@mactac.com
Phone	800-548-3456
Fax	800-233-4293
Shipment Lead Time	
Pre-slit Program	Same day if received by 12pm EST or next day
GS Tape Products	Stock sizes ship same day if received by 12pm EST or next day MTO sizes ship within 10 - 15 business days
Standard Slitting Orders	Industrial Tape Products Ship in 5 - 7 business days unless otherwise noted on your quote. Medical Tape Products Ship in 10 business days unless otherwise noted on your quote.
Custom or Made to Order	Lead times vary based on construction, order volume and scheduling. Please work directly with your sales representative. Custom orders have a shipment tolerance of +/- 20% of the original quantity ordered. Customer will be billed for the actual amount of material shipped.

Standard Roll Lengths & Handling Charges			
Product Line	MOQ	Master Roll Length	Short Roll Fee Applied per Product
Double-Coated Tapes (IB Products)	1 master roll	750'	\$50.00
Foam Tapes (IM Products)	1 master roll	216'	
1/32" Foam		108'	
1/16" Foam	1 master roll		
Transfer Adhesives (IF Products)	1 master roll	540'	
* Longer roll lengths are available, maximum length will be determined by desired slit width.			
Standard Slitting Charges			
Set Up Charge - IB, IM, IF, CB, CF, ARTX, TM Products		Slitting Tolerance	Shipping Tolerance # of Slit Rolls
# of Cuts / Approx. Width	Fee		
0 - 9 Cuts >6"	n/a	+/- 1/32"	+/- 10%
10 - 27 Cuts 2" - 6"	\$50.00	+/- 1/32"	+/- 10%
28 - 54 Cuts 1" - 2"	\$100.00	+/- 1/32"	+/- 20%
55+ <1"***	\$150.00	+/- 1/32"	+/- 20%
** Please call your sales representative if you require slit rolls that are less than .75" wide. Lead time, roll lengths and slitting charges may vary.			

Packaging

			
Poker Packaging	Cradle Packaging	Carton Packaging	Log Roll Carton Packaging
Pallets will be selected to best match order widths, lengths and volumes.	Pallets will be selected to best match order widths, lengths and volumes.	Pallets will be selected to best match order widths, lengths and volumes.	Pallets will be selected to best match order widths, lengths and volumes.
Chip board / Deck Pads	Chip board / Deck Pads	Chip board / Deck Pads	Chip board / Deck Pads
Rolls placed with labels lined up uniformly facing the outside of the length of the pallet.	Rolls placed with labels lined up uniformly facing the outside of the length of the pallet.	Place poly bag into carton	Poly bag each roll
Release discs between rolls.	Release discs between rolls.	Release paper on bottom and between rolls	Upsom pad (fit to carton) with plastic plug (2113) and release disc on each end of the roll
2 x 2 angle board between roll cores.	2 x 2 angle board between roll cores.	Pilot core between roll cores (must be 2" from top)	
Poly Sheet	Plastic banded rolls to pallet through 2 x 2 angle boards	May use upsom between layers for stability	
Stretch wrap	Roll wedges	Corner board	
Pallet label placed on top end of the length side of pallet facing out	Poly sheet	Polyband to pallet	Lay carton down on skid
	Stretch wrap	Stretch wrap	Rope and stretch wrap
	Pallet label placed on top end of the length side of pallet facing out.	Pallet label placed on top end of the length side of the pallet.	Pallet label placed on top end of the length side of the pallet.
* Special Requests - Call Customer Service at 800-548-3456. Additional charges may apply.			

Pallet Options	
30" L x 30" W	48" L x 40" W
36" L x 36" W	48" L x 48" W
45" L x 45" W	54" L x 30" W
48" L x 30" W	60" L x 30" W

**Pallets can contain mixed roll widths.
All efforts will be taken to
keep mixed pallets to a minimum.**

Quick Ship Service Program

Standard width log rolls available to ship in 1-2 business days!

Category	Part Number	Description	Roll Dimensions	KC	PA
Double Coated Tape - Rubber Adhesive	IB1122-60PS	.5 mil Clear PET 2.1/2.1 mils FBR899 Rubber 60# SCK	60" x 750'	✓	
	IB1182XTPS	.5 mil Clear PET 1.2/1.2 mils XT Rubber 60# SCK	54" x 750'		✓
	IB1190XTPS	.5 mil Clear PET 2.0/2.0 mils XT Rubber 60# SCK	54" x 750'	✓	✓
Double Coated Tape - Acrylic Adhesive	IB4131-72PS	.5 mil Clear PET 1.8/1.8 mils HTA410 72# PCK Liner	54" x 750'	✓	

Specification Reference Guide

Ford						
Adhesive Series	XT Rubber			FBT	HTA410	
Specification						
ESF-M11P5-A	IB1178XT	IB1184XT	IB1190XT			
ESF-M11P5-B	IB1178XT	IB1184XT	IB1190XT			
ESH-M11P40-A	IB1178XT	IB1184XT	IB1190XT	FBT360/380		
ESA-M3G170-A	IB1178XT	IB1184XT	IB1190XT	FBT360/380		
ESA-M11P19A	IB1178XT	IB1184XT	IB1190XT	FBT360/380		
WSA-M11P19C	IB1178XT	IB1184XT	IB1190XT	FBT360/380		
ESB-M3G76-B2	IB1175XT	IB1183XT	IB1190XT		IB4131-72	IB4131-80

General Motors						
Adhesive Series	XT Rubber			FBT	HTA410	
Specification						
GMW16443	IB1190XT	IB1183XT	IB1175XT			

VOC & Fog Specifications		Adhesive		
JIS-A 1901		LV820 Products	LV840 Products	HBA724
SAEJ1756				HBA724
VDA 278		LV820 Products	LV840 Products	

Terms & Conditions

NOTICE: THIS ORDER WILL BE ACCEPTED AT TIME OF INVOICING AND SHIPMENT, AND WILL BE BILLED AT THE PRICE PREVAILING AT THE TIME OF SHIPMENT OF THE GOODS.

RETURNED MERCHANDISE CLAIMS - WILL NOT BE ACCEPTED UNLESS AUTHORIZED IN WRITING BY OUR HOME OFFICE. ALL CLAIMS FOR DEFECTIVE MERCHANDISE MUST BE MADE WITHIN 30 DAYS OF THE RECEIPT OF SHIPMENT. CLAIMS FOR LATENT DEFECTS MUST BE MADE WITHIN 90 DAYS.

WE HEREBY CERTIFY THAT THESE GOODS WERE PRODUCED IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF SECTION 6, 7, AND 12 OF THE FAIR LABOR STANDARDS ACT, AS AMENDED, AND OF REGULATIONS AND ORDERS OF THE UNITED STATES DEPARTMENT OF LABOR ISSUED UNDER SECTION 14 THEREOF.

STANDARD TERMS AND CONDITIONS OF SALE

1. Acceptance: This order is accepted by the seller (the "Company"), on and subject to the following terms and conditions, which terms and conditions may not be varied or added to except by a writing signed by the Company's duly authorized representative. Any terms in Purchaser's order or confirmation which are inconsistent herewith shall not be binding upon the Company. Telephone Monitoring - We treat every customer call confidentially. To ensure that you receive accurate and courteous customer service, on occasion, your call may be monitored by a second employee.

2. Terms: All orders will be accepted at time of shipping and invoicing, and will be billed at the price prevailing at the time of shipment of the goods.

The terms of payment will be set forth on the face of the invoice.

3. Freight: All shipments are F.O.B. Factory, Shipping Point. All risk of loss or damage to the goods shall pass to the Purchaser upon delivery of the goods to a common carrier, whether sold with freight allowed or otherwise. The Company reserves the right to ship goods via the most economical routing; if shipped otherwise upon the Purchaser's request, Purchaser shall pay the difference in rate of transportation.

4. Taxes: All sales, excise or similar taxes which the Company may be required to pay or collect with respect to the goods covered by this order shall be paid by Purchaser, except as otherwise provided by law.

5. Excuse: The Company shall not be liable for failure to perform this contract by reason of strikes, fires, floods, unavoidable accidents, wars, delays in transportation, acts of God, or other causes beyond its reasonable control.

6. Warranty: The customer assumes all risk and liability for results obtained by the use of the Company material, whether used singly or in combination with other products. The Company is not responsible for the performance of materials which are (a) over 180 days old or (b) stored under conditions other than those specified on the Company shipping or carton label. The Company warrants that its goods are as described on the face hereof and are of commercially acceptable quality.

THE COMPANY MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED AND ALL OTHER WARRANTIES INCLUDING, WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, ANY AND ALL WARRANTIES OF MERCHANTABILITY OR WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY EXCLUDED AND DISCLAIMED. THE COMPANY'S LIABILITY PURSUANT TO ANY WARRANTY SHALL BE LIMITED TO THE REPAIR OR REPLACEMENT OF THE MATERIAL SOLD OR REPAYMENT OF THE PURCHASE PRICE. UNDER NO CIRCUMSTANCES SHALL THE COMPANY BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OR DAMAGE TO OTHER PROPERTY, WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, THE COMPANY SHALL HAVE NO LIABILITY FOR LOSS OF BUSINESS, BUSINESS INTERRUPTIONS, OR LOST PROFITS. IN NO EVENT SHALL THE COMPANY'S LIABILITY ON ANY WARRANTY OR CLAIMS WHATSOEVER, EXCEED THE COST OF THE MATERIALS SOLD.

7. Claims: Purchaser shall give written notice to the Company of any claims for breach of warranty within thirty (30) days after receipt of the goods if the breach or defect in the goods was or should have been discovered upon inspection of the goods; and Purchaser shall give written notice to the Company of any other claims for breach of warranty within ninety (90) days after it discovers or should have discovered such breach. Any remedy of the Purchaser against the Company shall be barred unless notice is given in accordance with the foregoing provision. All actions by the Purchaser for breach of warranty against the Company shall be brought within 180 days after the cause of action thereon accrues.

The liability of the Company for breach of warranty shall be limited solely to either the replacement of the goods or the return of the goods and repayment of the purchase price to Purchaser at the Company's discretion; such remedy shall be the exclusive and sole remedy of the Purchaser against the Company. The Company shall not be liable for any consequential or incidental damages suffered by Purchaser as a result of any breach of warranty.

8. Litigation: In the event that suit is brought against the Purchaser with patent infringement by reason of its use of any of the goods sold hereunder, Purchaser shall give notice in writing to the Company of such suit within ten (10) days after the service upon the Purchaser of notice of such action. Failure to give such notice shall bar any claim of Purchaser against the Company resulting from such litigation.

9. Applicable Law: This Agreement shall be governed by and construed upon the laws of the State of Ohio and Federal law where applicable.

10. Entire Agreement: This Agreement contains the entire agreement between Purchaser and the Company and shall not be varied or added to except by a further written agreement signed by Company's duly authorized representative.

11. Indemnities: The Buyer shall indemnify and hold harmless the Producer from any and all loss, cost, expense and damages on account of any and all manner of claims, demands, actions and proceedings that may be instituted against the Producer on grounds alleging that the said product and method violates any copyright or any proprietary right of any person, or that contains any matter that is libelous or scandalous, or invades any person's right to privacy or other personal rights, except to the extent that the Producer has contributed to the matter. The Buyer agrees to, at the Buyer's own expense, promptly defend and continue the defense of any such claim, demand action or proceeding that may be brought against the Producer, provided further that the producer shall give to the Buyer such reasonable time as the exigencies of the situation may permit in which to undertake and continue the defense thereof.

