

**Assortment Overview of Double-Sided Tapes** 

## The World of Bonding Applications

As a leading global manufacturer of adhesive solutions, our qualified experience comes with a deep understanding for expert services. For this reason, we offer a wide range of specially developed double-sided tapes that effectively meet the application requirements of our customers.

The result: an assortment of adhesives, liners, and backings providing custom bonding solutions for a diverse field of business.

		of Double-Sided Tapes vs. and Mechanical Fastening	Double-sided tapes	Liquid glue	Mechanical fastening (e.g., rivets, screws, nails)
		Compensation of irregular or uneven surfaces – gaps between bonded surfaces are eliminated	•••	••••	•
	X	Compensation of tension and stress dissipation – single bonding point with mechanical fasteners can lead to material breakage	••••	••	•
Quality		Shock absorption	••••	••	•
Que	7	Reduced risk of corrosion	••••	••••	•
		Sealing function – tape seals and protects against dust and moisture	••••	••••	••
		Noise-dampening properties – sounds caused by vibration are eliminated	••••	•••	•
Nbly	()	Fast application process – elimination of curing time and reduction of complexity	••••	•	••
Assembly		Healthy working environment and clean production sites	••••	••	••
uß		Improved visual appearance — no damage to the material	••••	•••	•
Design		Invisible fastening – mounting of transparent materials	••••	•••	•

#### • • • Very good • • Good • • Medium • Low

## **TOP SOLUTIONS**

## **Double-Sided Tapes for Varied Applications**

#### Overview

- Our double-sided adhesive system
- Release liner categories
- Construction of our double-sided tapes
- Test methods



#### Film Tapes

- High tensile strength
- Well suited for the production of die-cuts
- Suited for high-speed manufacturing processes



### **Differential Tapes**

6 - 9 · Differential adhesive coating

4 – 5

10 - 11

weight on both sides of the backing Strongly differing peel adhesion



### Non-woven Tapes

- Flexible and extremely conformable
- Easily hand tearable, yet tear resistant
- Cushioning features



### **Paper Tapes**

- Flexible · High temperature resistance
- Hand tearable



#### **Cloth Tapes**

- Flexible
- High temperature resistance
- · Thick backings are abrasion resistant



#### Transfer (without backing)

· Heat activated film for extremely high bonding demands



tesa® ACXplus

Viscoelasticity

Bonding power

Stress dissipation

- Compensation of tension, gaps, and irregular surfaces
- High bonding power even on rough surfaces
- Excellent shock absorption
- · Sealing function against dust and moisture



## tesa HAF®

18 - 21

14 – 17

- Heat activated film for extremely high bonding demands
- Reliable under extreme environmental conditions



Application tips for double-sided tapes

• Temperature and weather resistance

- The right double-sided tape solution for your requirements

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Our offering

2 Advantages of Tape Contents 3

## **EXCELLENT QUALITY**

## **Discover the Features of Our Double-Sided Tapes**

Our Double-Sided Adhesive Systems

## Pure acrylic Pure acrylic adhesive is especially suitable for outdoor applications and applications at elevated temperatures.

### **Attributes**

- · Good adhesive strength on polar and pretreated non-polar
- Very good performance -at elevated temperatures
- · Resistance against environmental conditions (e.g., UV, humidity) and aging.

#### **Tackified acrylic** Attributes

Tackified acrylic is a versatile adhesive with a wellbalanced performance on a wide variety of surfaces for permanent applications.

- · Very good adhesive strength on polar surfaces, good on non-polar surfaces
- · High initial adhesion power
- · Resistance against environmental conditions (e.g., UV, humidity) and aging.

### Synthetic rubber (SiS)

### **Attributes**

SiS adhesive is suitable for a variety of surfaces but offers limited aging and temperature resistance.

· High immediate adhesive bonding strength

- · Good shear resistance
- · Very good bonding on polar and non-polar surfaces

#### Natural rubber

### **Attributes**

Natural rubber adhesive is extremely sticky for use on rough surfaces.

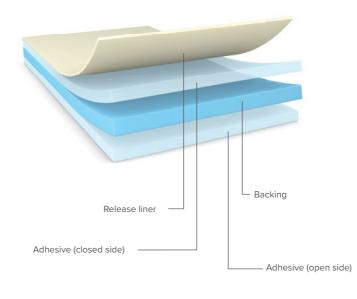
- · High immediate adhesive bonding strength
- · Very good bonding on polar and non-polar surfaces
- Preferred for use in indoor applications

### Release Liner Categories

Product features/advantages	Color	Thickness [μm]	Weight [g/m²]	Breaking force [N/cm]
Siliconized paper  Low electric discharge  Stable under pressure due to hard paper core	Brown	70	82	>63
PE (polyethylene) coated paper    Good tensile strength    Excellent die-cutting properties    Excellent humidity resistance	White	122	120	>73
PP (polypropylene) release film Dust-free convertibility	Red	80	72	>180
<ul><li>High tear resistance</li><li>Safe use in automated processes</li></ul>	Red	120	108	>180
PET (polyethylene terephthalate) release film  • Excellent tear strength	Tuononouout	50	72	>70
<ul><li>Good thickness tolerance</li><li>Dust-free processing</li></ul>	Transparent	75	109	>100
PE (polyethylene) release film  Flexible and soft for easy application on curved surfaces  No fraying during the sawing process	Dark blue	100	94	>16

## Construction of Our Double-Sided Tapes

## Structure of double-sided adhesive tapes



### Our double-sided tapes consist of three main components:

#### **Backing**

The backing is relevant for some of the main features of a double-sided tape. For rougher surfaces thicker foam tapes come into play. Film tapes can be used for transparent bonding requirements and tesa® ACXplus tapes are able to dissipate stresses thanks to their viscoelastic characteristics.

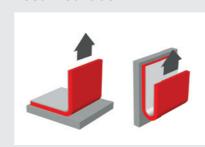
### Adhesive system

The proper choice of the adhesive system depends on how the double-sided tape is to be used: the kinds of surfaces which are to be bonded, how long the bond is supposed to last, and whether it is an indoor or an outdoor application.

#### Liner

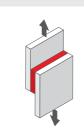
The liner covers the adhesive system and is an important element for the application and removal process. liners are usually used for automatic and paper liners for manual applications.

## **Test Methods**



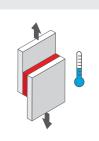
### Peel adhesion

Adhesive strength describes the bonding power of the tape to steel. Hence, the value is an important parameter in any application. Its value depends significantly on the surface characteristics, the pressure, and the time exposed to the bonding materials. A tape's peel adhesion is measured in N/cm by peeling the tape at a 90° or 180° angle at a constant speed of 300 mm/min from the test substrate after 72 hours' dwell time.



#### **Static shear resistance**

Shear resistance is defined by the inner cohesiveness of an adhesive and describes the holding power of a tape in a product application. Thus, shear resistance applies when the tape encounters high stress in the product application. A tape's shear resistance is measured in minutes by loading the tape generally with 10 N when adhered to a steel substrate on a 2.6 cm<sup>2</sup> bonding area at a temperature environment of 23°C and 50 percent humidity.



#### **Temperature resistance**

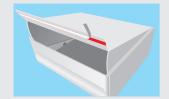
Temperature resistance characterizes the holding power of a tape in a product application at elevated temperatures. It is divided into short term (15 minutes) and long term (three months). Subsequently, the tape's shear distance over the time is evaluated at elevated temperatures.

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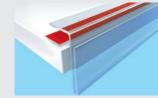
## **DIMENSIONALLY STABLE**

## Film Tapes: Ideal for Bonding to Flat, Smooth Surfaces

						Ultimate peel adhesion [N/cm]				
Product	Product description and application	Backing	Adhesive	Color	Thickness without liner [µm]	Steel	PVC	PE	Shear resistance 23°C	Temperature resistance [°C] short/long term
tesa® 4926	Thick double-sided tape with excellent bonding power on critical surfaces. The thick coating weight supports cushioning and gap filling. tesa® 4926 is mainly used for mounting components in the consumer electronics industry.	PET	Tackified acrylic	Transparent	250	16.2	16.5	7.5	•••	200/100
tesa® 4965	Exceptional bonding performance on critical surfaces and rough materials. tesa® 4965 shows excellent holding power at elevated temperatures and high initial adhesion power. It is used for a broad variety of applications, for example mounting of ABS/PE/PVC parts.	PET	Tackified acrylic	Transparent	205	11.8	13.0	6.9	•••	200/100
tesa® 51865	tesa® 51865 Profile FIT is the first asymmetrical film tape designed to fit the needs of trim and profile applications. The higher coating weight is located on the closed side of the tape to work on a great variety of surfaces.	PET	Tackified acrylic	Transparent	165	13.5/10.5*	14.0/11.0*	8.0/7.0*	•••	200/100
tesa® 4967	Well-balanced ratio of adhesive power and shear strength combined with outstanding humidity and temperature resistance. It is used in signage, splicing, and laminating trims and profiles.	PET	Tackified acrylic	Transparent	160	13.4	11.9	5.7	•••	200/100
tesa® 4928	For bonding of various polar (ABS, PC) and rough surfaces, for example signs, scales, or blinds. Balanced ratio between adhesion power and shear strength.	PET	Tackified acrylic	Transparent	125	12.0	10.1	5.4	•••	200/100
tesa® 4982	Excellent combination of high adhesion power and shear strength. Often used for bonding components in the consumer electronics industry. tesa® 4982 has an excellent temperature resistance.	PET	Tackified acrylic	Transparent	100	11.7	10.0	5.1	•••	200/100
tesa® 4980	Good bonding strength on most common smooth and even substrates. Reduced immediate contact adhesion makes initial repositioning possible. Used for mounting nameplates, badges, and light signs as well as decorative profiles in the furniture industry.	PET	Tackified acrylic	Transparent	80	9.7	10.7	4.6	•••	200/100
tesa® 4972	Thin product with high adhesion level relative to its thickness, tesa® 4972 allows repositioning and shows excellent resistance to demanding environmental conditions. Used to mount plastic badges and signs as well as components in the consumer electronics industry.	PET	Tackified acrylic	Transparent	48	9.6	9.4	3.5	•••	200/100
tesa® 4983	Very thin product with good adhesion level and excellent resistance to demanding environmental conditions. tesa® 4983 shows outstanding handling performance in converting processes and is used for bonding smaller components in the electronics industry.	PET	Tackified acrylic	Transparent	30	7.6	6.4	3.3	•••	200/100
tesa® 51977	Excellent initial tack and adhesion level, especially designed for carpet-laying applications and mounting of heavy decorative materials and displays.	PP	Tackified acrylic	White	240	15	14	7	•••	120/60
tesa® 51970	Exceptional bonding results on smooth and uneven surfaces. tesa® 51970 has an excellent balance between adhesion power and shear strength combined with high aging resistance. It is used for mounting solid decorative components, displays, and signs.	PP	Tackified acrylic	Transparent	220	13.5	17	6.8	•••	130/80
tesa® 64620	Very high initial bonding power, even on hard-to-bond and non-polar surfaces. Limited aging and temperature resistance. Applicable for example for mounting of building and furniture components and lamination of magnets.	PP	Synthetic rubber	White	185	26	25	9.5	••••	80/40
tesa® 64624	Exceptional high initial bonding power and high adhesion power on critical surfaces such as PE or PP. tesa® 64624 is used for example for temporary fixing of trims and profiles under normal temperature conditions.	PP	Synthetic rubber	Transparent	170	15.9	15.1	9.3	••••	80/40







Shelf edge strips, for example:

tesa® 4965
tesa® 51865



tesa® 51865\*
tesa® 4967



Mounting of transparent signs and displays, for example:

tesa® 4965

tesa® 51970



Mounting of profiles on various surfaces, for example skirtings and wall edging strips, for example:

tesa® 4970



tesa® 51970
 tesa® 51865

\*side with lower coating weight

Adhesive Backing •••• Very good ••• Good •• Medium • Low

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## Film Tapes: Ideal for Bonding to Flat, Smooth Surfaces

								_		
Product	Product description and application	Backing	Adhesive	Color	Thickness without liner [μm]	Steel	PVC	PE	Shear resistance 23°C	Temperature resistance [°C] short/long term
tesa® 51908	High bonding power combined with aging and humidity resistance, tesa® 51908 is used for permanent bag sealing. Tape can be easily cut with common hot wire systems.	PP	Tackified acrylic	Transparent	100	13.7	11.5	4.3	•••	120/80
tesa® 64621	Very high initial bonding power, even on non-polar surfaces. Limited aging and temperature resistance. Applicable for example for mounting of decorative trims and profiles or bonding of metal, cloth, paper, and synthetic materials.	PP	Synthetic rubber	Transparent	90	15.0	9.5	6.5	••	80/40
tesa® 4968	Flexible backing with excellent initial bonding strength, tesa® 4968 is to a large extent plasticizer resistant and has outstanding converting properties. Applicable for example for car mirror mounting.	PVC	Tackified acrylic	White	295	28.2	23.0	8.8	•••	70/60
tesa® 4970	Exceptional bonding performance on smooth and rough surfaces. The tape shows very good plasticizer and aging resistance and is used for mounting of heavy signs and point of sale displays.	PVC	Tackified acrylic	White	225	13.6	16.6	9.1	•••	70/60
tesa® 4963	Product with good shear strength and humidity resistance. tesa® 4963 features a creped, non-siliconized liner. Applicable for example for sealing of synthetic and paper bags and splicing applications.	PVC	Natural rubber	Transparent	110	6.1	5.9	4.5	••••	70/40

### Fingerlift



- Overlapping liner for convenient release
- Available as single- and double-sided fingerlift





Benefits of our high-quality cross-wound spools

- Proven performance in automated processes
- Less downtime, higher production output
- · Less material waste

Ultimate peel adhesion [N/cm]

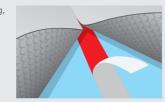
## **PRACTICAL EFFECTIVENESS**

## **Differential Tapes: High Quality in Practice**

								N/cm]		
Product	Product description and application	Backing	Adhesive	Color	Thickness without liner [μm]	Steel	PVC	PE	Shear resistance 23°C	Temperature resistance [°C] short/long term
tesa® 4720	Double-sided self-adhesive tape with differential acrylic adhesive. Open side: high adhesion level/secure bond of different substrates. Covered side: low adhesion level, residue-free removability.	PET	Tackified acrylic/ pure acrylic	Transparent	100	12.9/5.7	11.5/5.3	4.9/1.1	•••	200/80
tesa® 4917	Differential adhesive tape with high aging and humidity resistance. Suitable for example for reversible and non-permanent sealing of plastic bags and production support in the manufacturing of compounds.	PP	Tackified acrylic	Transparent	90	11.4/4.1	11.0/7.0	4.1/2.3	•••	120/80
tesa® 51960	Differential adhesive coating weight for residue-free removal on one side and high bonding strength on the other. Very resistant to aging and plasticizers. Applicable for example for floor laying, even for PVC and CV floors.	PP film reinforced fabric	Tackified acrylic/ pure acrylic	Transparent	248	6.6/13.7	6.2/13.8	3.5/5.1	••	120/60
tesa® 51903	Differential adhesive makes the product especially suitable for the closure systems of bags and mounting in the lithographic industry. Supplied without liner.	PVC	Tackified acrylic	Transparent	86	3.0/4.6	2.5/5.2	1.8/0.7	•	70/60
tesa® 4914	This differential tape shows excellent initial tack and high temperature resistance. Due to a specially foamed adhesive on the closed side, it is highly conformable to rough surfaces. It is used for example for cable mounting in the automotive industry.	Non-woven	Tackified acrylic	Translucent	250	7.8/9.3	7.7/7.8	3.4/5.3	•	140/80
tesa® 4939	Specially formulated adhesive on the open side combines a high bonding power with residue-free removability for up to 14 days from most common surfaces. Applications include temporary floor laying during fairs and exhibitions. tesa® 4939 is hand tearable.	Cloth	Synthetic rubber	White	235	5.5/8.0	5.9/11.2	2.0/5.0	••••	80/40

Headliner cable mounting,

for example:
tesa® 4914

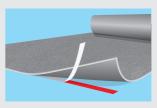


Laminating PVC and CV floors, for example:

tesa® 51960



Resealable closing of plastic bags, for example: • tesa® 4917



Floor laying, for example:
tesa® 4939

Adhesive Backing •••• Very good ••• Good •• Medium • Low

Adhesive Backing •••• Very good ••• Good •• Medium • Low

# **EASILY TEARABLE**

## Non-Woven and Paper Tapes: Conform to Slightly Irregular Surfaces

						Ultimate peel adhesion [N/cm]				
Product	Product description and application	Backing	Adhesive	Color	Thickness without liner [µm]	Steel	PVC	PE	Shear resistance 23°C	Temperature resistance [°C] short/long term
tesa® 4959	Product with highly flexible backing, high initial bonding power and well-balanced ratio of shear strength and adhesive power. tesa® 4959 is extremely age resistant and especially designed to bond flexible materials.	Non-woven	Tackified acrylic	Translucent	100	8.5	14.0	4.5	•••	200/80
tesa® 4960	Product with good shear strength and humidity resistance. tesa® 4960 features a creped, non-siliconized liner. Applicable for example for sealing of synthetic and paper bags and splicing applications.	Non-woven	Tackified acrylic	Translucent	100	4.7	3.8	0.5	•	200/80
tesa® 4943	High initial bonding power and a good shear resistance make this product suitable for splicing applications.  The flexible backing is applicable for the lamination of leather, textiles, and foams.	Non-woven	Tackified acrylic	Translucent	100	8.1	10.8	1.6	••••	100/70
tesa® 68644	Very good balance of adhesion and cohesion, and excellent temperature resistance. tesa® 68644 is used for the mounting on various kinds of plastic and metal surfaces.	Non-woven	Tackified acrylic	Translucent	100	9.4	11.8	3.8	•••	200/80
tesa® 68645	High peel adhesion level and good shear resistance. tesa® 68645 is recommended for deco panel mounting in elevators and also for some general-purpose mounting.	Non-woven	Tackified acrylic	Translucent	120	12.0	11.0	3.5	••	150/80
tesa® 4987	Good ratio of high initial tack and ultimate adhesion level even on rough surfaces, tesa® 4987 shows good shear resistance and resistance against environmental conditions. Used for example for fixing of furniture parts and lamination of foam and rubber substrates.	Non-woven	Tackified acrylic	Translucent	125	11.2	11.4	4.8	•••	200/80
tesa® 4962	Excellent bonding results on smooth and rough surfaces combined with high initial adhesion power and outstanding aging resistance. tesa® 4962 is used for example for mounting of automotive interior components and flying splice applications.	Non-woven	Tackified acrylic	Translucent	160	12.0	15.0	7.0	•••	200/80
tesa® 4940	Very good anti-repulsion performance and high adhesion level on various kinds of surfaces. tesa® 4940 is used for the mounting of plastics, foam parts, felt, and cardboard.	Non-woven	Tackified acrylic	Translucent	160	11.3	12.2	3.8	•••	150/80
tesa® 52215	Ultra low VOC and conformable tape especially designed for demanding lamination and converting requirements. tesa® 52215 features secure mounting even to nonpolar plastics and composites.	Non-woven	Acrylic	Translucent	150	13.0	14.0	4.2	••	150/80
tesa® 51570	High initial bonding power, also on non-polar surfaces. Very flexible for processing of elastic material, for example the closure of film and plastic bags, and splicing in the paper and carton industry.	Non-woven	Synthetic rubber	Translucent	110	13.0	12.5	7.0	•••	80/40
tesa® 51571	Flexible product with high bonding and shear strength, even on non-polar surfaces. Applicable for example for lamination of foams, film bags, posters, and displays.	Non-woven	Synthetic rubber	Translucent	160	13.0	13.0	8.5	••••	80/40
tesa® 4961	Product with very high shear strength, but removable from firm surfaces. Applicable for example for mounting of synthetic materials and splicing of paper and film.	Paper	Natural rubber	White	205	8.0	6.3	4.1	••••	110/40
	in the appliance industry, for example:  • tesa® 4959  manu (pref	ng aid for leather in ufacturing of shoes ixation), for example esa® 4962 esa® 51571	and bags		corrug for exa • tes • tes	pping splicing in ated business, imple: a* 4962 a* 4959 a* 4943			Tube isolation, for exam tesa® 51571	ple:

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## **RELIABLE BONDINGS**

## **Cloth Tapes: For Rough Surface Applications**

						Ultim	ate peel adhesion [	N/cm]		
Product	Product description and application	Backing	Adhesive	Color	Thickness without liner [µm]	Steel	PVC	PE	Shear resistance 23°C	Temperature resistance [°C] short/long term
tesa® 4954	Product with high shear strength and very good tack, for example for bonding of leather, PVC, and aluminum during manufacturing. Product has a creped silicone paper liner.	Cloth	Natural rubber	White	430	5.7	5.3	3.5	••••	200/50
tesa® 4964	Product with high shear strength and high adhesive coating weight for use on rough and non-polar surfaces (PP/PE). Removable from clean and firm surfaces.	Cloth	Natural rubber	White	390	7.6	7.0	5.4	••	110/30
tesa® 4974	Very good bonding results on rough and fibrous substrates due to high adhesive coating weight, for example carpets.	Cloth	Natural rubber	White	380	6	5.0	3.6	•	110/30
tesa® 4934	Product with high tack for bonding of rough and fibrous surfaces, for example carpet laying. Product is hand tearable.	Cloth	Synthetic rubber	White	200	24.0	22.5	8.5	••••	60/40
	Mounting of fabrics and textiles, for example:  • tesa® 4964  Mounting for example:  • tesa® 4  • tesa® 4	examp • tes	aying, for ole: sa® 4964 sa® 4934			Honeycomb milling, for example:  tesa® 4964				

# **PRACTICAL EFFECTIVENESS**

## **Transfer Tapes: High Quality in Practice**

			Ultimate peel adhesion [N/cm]							
Product	Product description and application	Backing	Adhesive	Color	Thickness without liner [μm]	Steel	PVC	PE	Shear resistance 23°C	Temperature resistance [°C] short/long term
tesa® 68105	tesa® 68105 is a transparent transfer tape suitable for demanding lamination jobs. Main applications are lamination of overlays on touch switches, fastening of printed nameplates, and label stock.	Without backing	Pure acrylic	Transparent	50	6.7	6.7	1.6	••••	200/150
tesa® 52105	Conformable transparent transfer adhesive layer of water based acrylic that features very low total VOC values.	Without backing	Acrylic	Transparent	50	9.5	8.9	1.8	•	200/80
tesa® 52110	Especially designed for all kind of converting and demanding lamination requirements such as lamination of critical, soft, light, smooth substrates / sheets to mount on LSE and 3D-shapes.	Without backing	Acrylic	Transparent	100	13	11.8	2.1	•	130/50
tesa® 4900	tesa® 4900 consists of a transparent pure acrylic adhesive which is aging resistant and has a high initial tack. tesa® 4900 also withstands elevated temperatures.	Without backing	Pure acrylic, fiber reinforced	Transparent	50	3.8	5.6	1.0	••	200/80
tesa® 4985	tesa® 4985 is a transparent transfer tape using a modified acrylic adhesive. Main applications: mounting of posters and photos, mounting of fabric for pattern books, splicing of paper.	Without backing	Tackified acrylic, fiber reinforced	Transparent	50	11.1	9.4	4.9	••	200/80

Adhesive Backing •••• Very good ••• Good •• Medium • Low

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Adhesive Backing •••• Very good ••• Good •• Medium • Low

# **OPTIMUM PERFORMANCE**

## Foam Tapes: Bond Different Substrates, Absorb Shocks, Seal Gaps

				Ultimate	peel adhesic	n [N/cm]						
Product	Product description and application	Backing	Foam strength	Adhesive	Color	Thickness without liner [µm]	Steel	PVC	PE	Shear resistance 23°C	Temperature resistance [°C] short/long term	Test reports
INDOOR	MOUNTING											
tesa® 64956	tesa® Indoor Mounting Tapes providing excellent tack, high bonding strength even on low	PE foam	Medium	Synthetic rubber	White/black	800	15*	15	12	••••	60/40	Leed certification
tesa® 64958	energy surface substrates and very good shear resistance at room temperature.  The product has been designed for indoor applications or where the bond is not exposed to direct sun light. They are used for e.g. trims and profiles or indoor signs.	PE foam	Low	Synthetic rubber	White	1,050	4.0*	4.0*	4.0*	••••	60/40	
tesa® 64962	direct sun light. They are used for e.g. timis and promes of indoor signs.	PE foam	Medium	Synthetic rubber	White/black	1,600	16.0*	16	16	••••	60/40	
MULTI-PU	RPOSE											
tesa® 62505		PE foam	Medium	Tackified acrylic	White/black	500	9.5*	9.5*	1.2	•••	80/80	
tesa® 62508		PE foam	Medium	Tackified acrylic	White/black	800	13.5*	13.5*	0.9	•••	80/80	UL file number E334507
tesa® 62510		PE foam	Medium	Tackified acrylic	White/black	1,000	13.5*	13.5*	0.9	•••	80/80	UL file number E334507 TÜV Rheinland test report (solar) TÜV Rheinland LGA (mirror mounting)
tesa® 4957	tesa® Multi-Purpose Tapes offering very good maximum peel adhesion even on rough and critical surfaces and a good shear resistance for moderate loadings. The backing is a high quality polyethylene foam with a special balance between strength and conformability.	PE foam	Low	Tackified acrylic	White/black	1,100	4.0*	4.0*	2.2	•••	80/80	TÜV Rheinland LGA (mirror mounting)
tesa® 62512	The tapes have been designed for permanent indoor and outdoor applications, e.g. mounting of decorative trims and profiles, solar frames or window muntin bars.	PE foam	Medium	Tackified acrylic	White/black	1,200	13.5*	13.5*	0.9	•••	80/80	UL file number E334507
tesa® 62516		PE foam	Medium	Tackified acrylic	White/black	1,600	13.5*	13.5*	1.2	•••	80/80	
tesa® 62938		PE foam	Medium	Tackified acrylic	White/black	2,000	6.0*	6.0*	2.0*	•••	80/80	
tesa® 62939		PE foam	Low	Tackified acrylic	White	3,000	6.0*	6.0*	2.0*	•••	80/80	ift directive MO-01/1: 2007-01 (structure connection of windows)
HIGH BO	ND							I				
tesa® 62932		PE/EVA foam	High	Tackified acrylic	White/black	500	17.0*	17.0*	3.0	•••	80/80	UL file number E309290/334507
tesa® 62934	tesa® High Bond Tapes offering a versatile adhesive with excellent immediate and maximum peel adhesion even on rough and critical surfaces and a good shear resistance for high loadings. The backing is a high quality polyethylene foam with high internal strength.	PE foam	High	Tackified acrylic	White/black	800	17.0*	17.0*	2.8	•••	80/80	UL file number E309290/334507 Leed certification
tesa® 4952	The tapes have been designed for demanding indoor and outoor aplications, e.g mounting of glass panels, mirror mounting or decorative profiles and elements on white/brown goods.	PE foam	Medium	Tackified acrylic	White	1,150	8.0*	8.0*	2.8	•••	80/80	TÜV Rheinland LGA (mirror mounting) Leed certification
tesa® 62936		PE/EVA foam	High	Tackified acrylic	White/black	1,600	19.0*	19.0*	3	•••	80/80	UL file number E309290/334507
		frame mounti	ng, e.g.:			Mirror mounting tesa® 4952				decorative trims, e.g.: 505 / tesa® 62932	Mounting of disp • tesa® 62934	

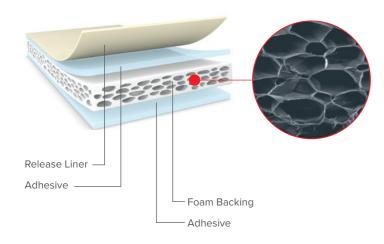
14 Foam Tapes 15

Adhesive Backing •••• Very good ••• Good •• Medium • Low

## Foam Tapes: Bond Different Substrates, Absorb Shocks, Seal Gaps

roaiii id	m Tapes: Bond Different Substrates, Absorb Shocks, Seal Gaps  Ultimate peel adhesion [No											
Product	Product description and application	Backing	Foam strength	Adhesive	Color	Thickness without liner [µm]	Steel	PVC	PE	Shear resistance 23°C	Temperature resistance [°C] short/long term	Test report
HIGH SH	GH SHEAR											
tesa® 62852	toca® High Shoar Tapos providing superior shoar and temporature resistance with an excellent ultimate adhesion	PE/EVA foam	High	Pure acrylic	Black	510	20*	>7.0	1.5	••••	100/90	
tesa® 62855	sesa® High Shear Tapes providing superior shear and temperature resistance with an excellent ultimate adhesion evel for very high loadings. The backing is a high quality polyethylene foam with high to very high internal strength.  The tapes have been designed for very demanding interior or exterior applications, e.g. automotive emblem		Very high	Pure acrylic	Black	900	23.0*	>9.0	2.0	••••	100/90	
tesa® 62856	mounting.	PE foam	High	Pure acrylic	Black	1,200	17.0*	>9.0	2.0	•••	80/80	
SPECIAL	TIES											
tesa® 65610	tesa® 65610 Removable is especially suitable for customers that want to remove bonded parts from non- delaminating surfaces without leaving behind undesirable foam residue. Thanks to its unique product design foam residues can be removed quickly, easily and completely.	PE foam	Low	Tackified acrylic	White	1,250	4.0*	4.0	3.0	•••	80/60	
tesa® 62957	tesa® 62957 was designed for customers operating under cold temperatures on construction sites or in unheated production environments. Where other tape technologies fail, our tesa® 62957 shows an impressive performance on a variety of different substrates at very low temperatures (down to -10°C). The tape is used for e.g. mounting of shelf edge strips.	PE foam	Medium	Acrylic	White	1,000	13.5*	13.5*	3.5	••	80/80	ift directive MO-01/1: 2007-01 (structure connection of windows) Leed certification
tesa® 62612	tesa® 62612 features an especially high ultimate adhesion level for a secure bonding performance. The product has been designed for dry window glazing.	PE/EVA foam	High	Pure acrylic	Black	1,600	19.0*	19.0*	1.0	••••	100/90	ift directive VE-08/2 part 1 (bonded glazing systems)
tesa® 4976	tesa® 4976 consists of a polyurethane foam and features especially high short-term temperature resistance. The tape is used e.g in the atuomotive or electronics industry.	PUR foam	High	Tackified acrylic	White/Black	540	12.0*	12.0*	4.3	•••	200/80	

## Construction of our PE Foam Tapes



## Main features:

- Compensation of irregular surfaces and gaps
- High bonding power even on rough surfaces
- Excellent shock absorption properties
- Compensation of tension and stress dissipation
- Sealing function against dust and moisture
- Excellent noise-damping properties
- Cost efficient bonding of many different substrate

16 Foam Tapes Foam Tapes 17

# **INTELLIGENT TECHNOLOGY**

## tesa® ACX<sup>plus</sup>: For Permanent and Constructive Bonding

						U	timate peel a	dhesion [N/c			
Product	Product description and application	Backing	Adhesive	Color	Thickness without liner [µm]	Steel	PMMA	Aluminum	Glass	Shear resistance 23°C	Temperature resistance [°C short/long term
SRAY / WH	ITE										
esa® ACX <sup>plus</sup> 7042		Foamed acrylic	Pure acrylic	Gray/white	500	23	18	24	21	••••	200/120
esa® ACX <sup>plus</sup> 7044	High-performance acrylic foam tape, primarily characterized by its bonding power, stress dissipation, and temperature and weather resistance. The	Foamed acrylic	Pure acrylic	Gray/white	1,000	33	24	35	32	••••	200/120
esa® ACX <sup>plus</sup> 7046	tesa® ACX <sup>plus</sup> 704x series is specially designed to allow invisible bonding of decorative elements.	Foamed acrylic	Pure acrylic	Gray/white	1,500	36	32	40	37	••••	200/120
esa® ACX <sup>plus</sup> 7048		Foamed acrylic	Pure acrylic	Gray/white	2,000	38	33	45	40	••••	170/120
HIGH TRAN	SPARENCY										
esa® ACX <sup>plus</sup> 7054		Solid acrylic	Pure acrylic	Transparent	500	19	12	19	17	••••	200/100
esa® ACX <sup>plus</sup> 7055	Ultra-transparent pure acrylic tape for bonding of transparent and	Solid acrylic	Pure acrylic	Transparent	1,000	24	17	24	24	••••	200/100
esa® ACX <sup>plus</sup> 7056	translucent materials such as decorative glass panels, PMMA plates, extruded profiles, and glass partition walls. High UV, temperature, and solvent resistance. Recommended for outdoor applications.	Solid acrylic	Pure acrylic	Transparent	1,500	27	19	24	26	••••	200/100
esa® ACX <sup>plus</sup> 7058	·	Solid acrylic	Pure acrylic	Transparent	2,000	29	22	24	28	••••	200/100
esa® ACX <sup>plus</sup> 75530		Solid acrylic	Pure acrylic	Transparent	3,000	27	20	26	32	••••	200/100
IIGH ADHE	SION										
esa® ACX <sup>plus</sup> 7062		Foamed acrylic	Modified acrylic	Black	500	24	20	27	27	••••	170/70
esa® ACX <sup>plus</sup> 7063	Black acrylic foam tape with excellent immediate adhesion even on substrates with a low surface energy such as PP and powder-coated materials. Also resistant to plasticizers. Excellent bond on long-length	Foamed acrylic	Modified acrylic	Black	800	30	27	32	32	••••	170/70
esa® ACX <sup>plus</sup> 7065	parts such as bumper rails, as well as powder-coated signs, reinforcement bars in elevators, and decorative parts on white goods.	Foamed acrylic	Modified acrylic	Black	1,200	40	35	35	36	••••	170/70
esa® ACX <sup>plus</sup> 7066		Foamed acrylic	Modified acrylic	Black	1,500	45	41	40	39	••••	170/70
HIGH RESIS	STANCE										
esa® ACX <sup>plus</sup> 7072		Foamed acrylic	Pure acrylic	Black	500	20	12	18	20	••••	220/120
esa® ACX <sup>plus</sup> 7074		Foamed acrylic	Pure acrylic	Black	1,000	30	15	25	32	••••	220/120
sa® ACX <sup>plus</sup> 7076	Black acrylic foam tape which combines a very good temperature resistance with an outstanding cold shock resistance. It is suitable	Foamed acrylic	Pure acrylic	Black	1,500	35	19	28	36	••••	220/120
sa® ACX <sup>plus</sup> 7078	resistance with an outstanding cold shock resistance. It is suitable for demanding outdoor applications and exposure to extreme temperatures, UV, chemicals, salt water, and cleaning agents.  Recommended for reinforcement bar mounting, wall cladding, back rails, and decorative elements.	Foamed acrylic	Pure acrylic	Black	2,000	40	23	32	40	••••	220/120
sa® ACX <sup>plus</sup> 70725		Foamed acrylic	Pure acrylic	Black	2,400	31	17	28	30	••••	220/120
esa® ACX <sup>plus</sup> 70730		Foamed acrylic	Pure acrylic	Black	2,900	44	22	39	38	••••	220/120
esa® ACX <sup>plus</sup> 70740		Foamed acrylic	Pure acrylic	Black	3,900	45	24	40	39	••••	220/120

18 tesa® ACX<sup>plus</sup> 19

#### tesa® ACX<sup>plus</sup>: For Permanent and Constructive Bonding Ultimate peel adhesion [N/cm] Thickness Shear resistance Temperature resistance [°C] Product Product description and application Backing Color Adhesive PMMA Aluminum Glass Steel without liner [µm] 23°C short/long term LSE PERFORMER tesa® ACX<sup>plus</sup> 7092 40 40 40 40 Foamed pure acrylic Specialty Black 100/80 •••• Black acrylic foam tape that features an innovative functional adhesive $\,$ tesa® ACX<sup>plus</sup> 7094 40 40 40 40 100/80 Foamed pure acrylic Specialty Black layer. It makes strong bonds to low surface energy substrates (such as •••• critical plastics and powder-coatings) possible without the requirement of a surface pre-treatment (e.g. with adhesion promoter). Furthermore, 709x enables the ability to process tape in unheated production environments tesa® ACX<sup>plus</sup> 7096 Foamed pure acrylic Specialty 40 40 40 40 100/80 •••• with temperatures down to 0° C. tesa® ACX<sup>plus</sup> 7098 Foamed pure acrylic Specialty 40 40 40 40 100/80 Stiffener mounting in cassette systems, for example: Deco panel mounting, Bonding of deco panels on doors, Glass-to-glass bonding, for example: tesa® ACX<sup>plus</sup> 7058 for example: tesa® ACX<sup>plus</sup> 7078 for example tesa® ACX<sup>plus</sup> 7078 • tesa® ACX<sup>plus</sup> 704x

## **SUPERIOR BONDS**

## tesa HAF®: For Bonding Requirements at the Highest Level

Product	Product description and application	Backing	Adhesive	Color	Thickness without liner [μm]	Dynamic shear resistance [N/mm²]	Resistance against extreme enviromental conditions	Shear resistance 23°C	Temperature resistance [°C] short/long term
tesa HAF® 8401	tesa HAF® 8401 is a reactive heat activated film based on phenolic resin and nitrile rubber. It is suitable for bonding of all thermal resistant materials such as metal, glass, plastic, wood and textiles. Main application is high-strength overlap splicing.	Without backing	Nitrile rubber / phenolic resin	Amber	200	12	••••	••••	300°C/220°C
tesa HAF® 8410	tesa HAF® 8410 is a heat activated double-sided amber adhesive film based on reactive phenolic resin and nitrile rubber. Main application is the embedding embedding of chip-modules into smart cards.	Without backing	Nitrile rubber / phenolic resin	Amber	60	12	••••	••••	300°C/220°C
tesa HAF® 8430	tesa HAF® 8430 is a heat activated double-sided amber adhesive film based on reactive phenolic resin and nitrile rubber. Main application is the embedding embedding of chip-modules into smart cards.	Without backing	Nitrile rubber / phenolic resin	Amber	45	12	••••	••••	300°C/220°C
tesa HAF® 58434	tesa HAF® 58434 is a heat activated double-sided black adhesive film based on reactive phenolic resin and nitrile rubber. Main application is the embedding embedding of chip-modules into smart cards.	Without backing	Nitrile rubber / phenolic resin	Black	50	12	••••	••••	300°C/220°C
tesa HAF® 8440	tesa HAF® 8440 is a heat activated, double-sided translucent adhesive film based on thermoplastic copolyamide. Main application is the embedding embedding of chip-modules into smart cards.	Without backing	Copolyamide	Translucent	40	12	••••	••••	n/a
tesa HAF® 8414	tesa HAF® 8414 is a translucent heat activated adhesive film that contains electrically conductive particles. It is designed for all applications where reliable electrical connections and strong bonds are required, such as chip module embedding in Dual Interface cards and for RFID tags.	Without backing	Copolyamide	Translucent	45	12	••••	••••	n/a

Adhesive Backing •••• Very good ••• Good •• Medium • Low

20 tesa® ACX<sup>plus</sup>

## **VERSATILE POSSIBILITIES**

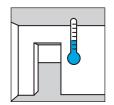
## **Made to Meet the Requirements of Our Customers**

Application Tips for Double-Sided Tapes



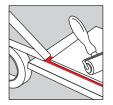
#### Surface preparation and cleaning

The surface should be free of dust, grease, oil, moisture, and other contaminants as they will decrease the level of bonding power significantly.



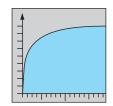
#### **Temperature**

Recommended optimal application temperature is from 20°C to 30°C in dry rooms. If possible, tapes should not be applied at temperatures below 10°C unless the tape is designed for application at low temperatures.



#### **Application**

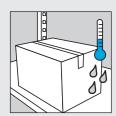
The tape should be applied to the surface at constant speed and pressure. For optimal results we recommend a uniform pressure, applied with an automatic or manual roller. After both parts are mounted together, we recommend a uniform pressure of 20 N/cm<sup>2</sup> over the complete area of the mounted components.



#### **Bond build rate**

The bond strength will increase over time until full strength is reached within 72 hours.

## Storage



Adhesive tapes should be stored at temperatures between 15°C and 35°C avoiding high humidity (optimal: 18°C and 55 percent humidity).



Especially for tesa® ACX<sup>plus</sup>: all slit edges should be covered with suitable separators made of siliconized film. If several rolls are stacked use two sheets per roll.



and storage.

To prevent damage or deformtion of the packaging, there should be no dust, dirt, or contamination during transportation

## The Right Double-Sided Tape Solution for Your Requirements



We offer you a wide range of different products, supporting you in all areas of your business.

At tesa, mutual trust and cooperation goes far beyond the implementation of adhesive tape solutions. Our consultants and application engineers guide the way to the efficient and economic use of our products in all manufacturing steps. Our laboratories provide the means and tools necessary for extensive application testing to simulate a wide range of extreme requirements and analyze critical materials and surfaces.

In our application laboratories, we analyze customers' materials in combination with several adhesive tape solutions. Depending on the customer-specific demands, the analysis includes tests on the resistance to UV light and high and low temperatures, peel adhesion, shock and tension absorption, and much more.

The result: adhesive tape solutions that are perfect for any technical application.

Benefit: the best customer-specific solution that meets all requirements.

## Our Offering

No matter what industry, no matter what your production process or how you want to apply your tape: whether die-cuts, pancake rolls, or spools and logs, we deliver the tape in the format you need for your application.



Together with our adhesive tapes, we offer dispensing and application tools for high-quality application results regardless of whether your production process is manual or highly automated. Our solutions allow you to implement a fast, simple, and clean assembly process, while reducing your total production costs. Our consultants and engineers are just a phone call away to support you with a proper dispensing solution and to make your production more efficient with the use of a double-sided tape solution.







Choose us and benefit from a strong partnership.

tesa® products prove their impressive quality day in, day out in demanding conditions and are regularly subjected to strict controls. All technical information and data above mentioned are provided to the best of our knowledge on the basis of our practical experience. They shall be considered as average values and are not appropriate for a specification. Therefore tesa SE can make no warranties, express or implied, including, but not limited to any implied warranty of merchantability or fitness for a particular purpose. The user is responsible for determining whether the tesa® product is fit for a particular purpose and suitable for the user's method of application. If you are in any doubt, our technical support staff will be glad to support you.

22 Application Tips & Storage









Our management system is certified according to the standards ISO 9001, ISO/TS 16949, and ISO 14001. All our products delivered to automotive customers are listed in the International Material Data System (IMDS).

tesa SE

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