



# AUTOMOTIVE CONVERTER ASSORTMENT

# AUTOMOTIVE CONVERTER ASSORTMENT



## Agenda

### About Us

#### Your Complete Automotive Converting Partner

- Pressure sensitive adhesive basics
- Surface tension

#### 1. Double-Sided Tape – Automotive

- Filmic and Non-woven Tapes
- Foam Tape
- Acrylic-Foam Tape
- Structural Tape
- LSE Tape
- Flame-Retardant Tape



#### 2. Functional Tape – Automotive/Electronics

- Electrically Conductive Tape
- Thermally Conductive Tape



#### 3. Optically Clear Adhesives

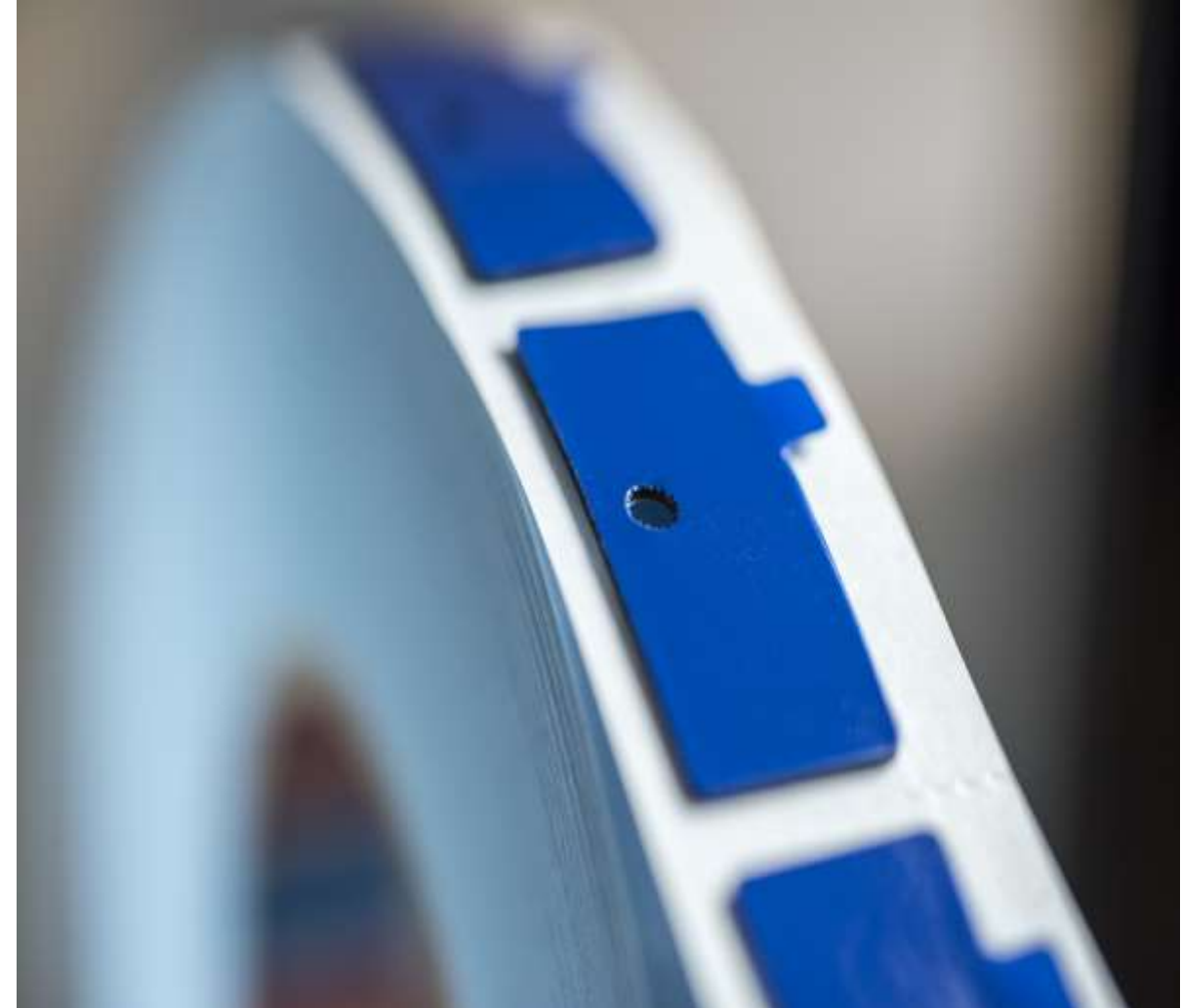
- Display Lamination Films
- Display Mounting Tape

#### 4. E-Mobility Solutions

- Electrical Insulation Tape
- Cell and Pack Mounting

#### 5. Single-Sided Tape – Automotive

- Permanent Protection Tape
- Masking Tape
- Multipurpose Tape
- Buzz Squeak and Rattle Prevention



# AUTOMOTIVE CONVERTER ASSORTMENT

## Company Presentation



## ABOUT US



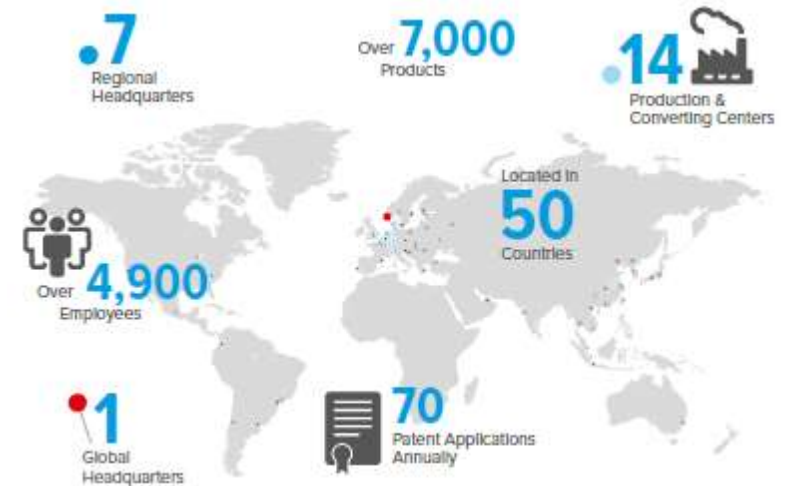
### Qualified Experience and Individual Support

As a leading global manufacturer of adhesive solutions for the automotive industry, we offer a wide range of specially developed adhesive tape for trends like car customization, e-mobility or low-VOC products. We are continuously developing new products enabling you to accelerate in this fast moving business and offer the latest innovations to your customers. We put you and your suppliers first by giving you the individual attention and service you deserve.

Our numerous sales offices, our research and development departments, and our production facilities offer worldwide assistance wherever our customers are located. At our Application Solution Centers, our technical experts evaluate your specific application needs. Our state-of-the-art equipment allows us to conduct the latest critical tests in order to find the adhesive tape that perfectly matches your individual needs.

## BY YOUR SIDE

We are one of the leading global manufacturers of self-adhesive tape. Our product solutions prove their performance in countless industrial sectors around the globe. The nearest office is just a call away – contact us.



### Your Contact:

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Phone: +49 40 88899 7274  
E-mail: [Thomas.Niemeyer@tesa.com](mailto:Thomas.Niemeyer@tesa.com)

# AUTOMOTIVE CONVERTER ASSORTMENT

tesa Converter Offers

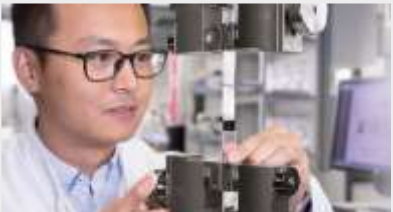


## YOUR COMPLETE AUTOMOTIVE CONVERTING PARTNER



### Our Offering

Because of our vast experience and our excellent adhesive technology, we are experts in adhesive tape solutions for the electronics industry. With our reliable solutions and exceptional service, we support you during the entire product development process to find the best tape solution for your requirements.



### Individual Support

We provide individual project support backed up by application engineers and research and development resources. Our technical experts in our Application Solution Center offer on-site support and evaluation of your individual application under laboratory conditions.



### Contact Us

Our local experts and engineers will support you with:

- Process-simulation studies
- Assistance at your manufacturing site
- State-of-the-art testing equipment
- Tests under a wide range of environmental conditions
- Customized tests with customer substrates

## tesa CONVERTER OFFERS

### Solutions That Go Beyond Tape

Our top converting partners get unlimited access to our application and material tests centers around the world. Furthermore, our automotive application engineers, key account managers, and product developers support our converting partners with product and part testing and application training, fast sample processes, and joint end-customer on-site plant and design center visits.

Our technical experts from the tesa production network and quality management department offer consulting to improve converting production processes and IATF 16949 implementation.

### Features of Our Tape



High bonding



Impact resistance



LSE performance



Quick bonding



Chemical resistance



Anti-repulsion



Balanced properties



Good die-cutting

... and many more

# AUTOMOTIVE CONVERTER ASSORTMENT

tesa Converter Offers



## FROM SKETCH TO REALITY

YOUR COMPLETE AUTOMOTIVE CONVERTING PARTNER



Even with the most demanding requirements, we support you in finding the best possible solution. We know Converting involves a variety of processes, such as:

- Die Cutting
- Slitting
- Punching
- Rewinding
- Lasering
- Laminating
- Printing
- Spooling

By combining your converting expertise with our high-quality products and expert adhesive consultancy, you can create customized products for all market needs.



### Product Excellence

Access to the broadest tesa product portfolio, including a selection of 60+ products handpicked for our Converter partners, on which we guarantee quick sampling in different formats (mini-log, A4 sheets) and minimum order quantity of one log roll on most standard orders.



### Expert support

Our Sales personnel and Converter Experts are there to assist you with any customer request. Technical experts at tesa Customer Solution Center also offer on-site and remote support and evaluation of your individual application under laboratory conditions.



### Testing & Validation

Our local experts and engineers will support you on-site and remotely, resorting to state-of-the-art equipment to perform:

- Comparative tests with competitor products
- Simulations under a wide range of environmental conditions
- Customized tests with customer substrates

## Features of Our Tapes



High bonding



Impact resistance



LSE performance



Quick bonding



Chemical resistance



Anti-repulsion



Balanced properties

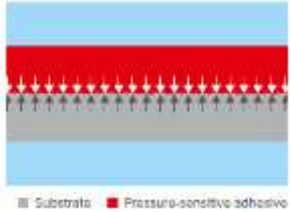


Good die-cutting

... and many more

# PRESSURE SENSITIVE ADHESIVE BASICS

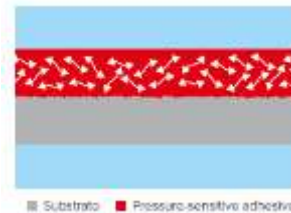
## An interplay between adhesion and cohesion



■ Substrate ■ Pressure-sensitive adhesive

### Adhesion

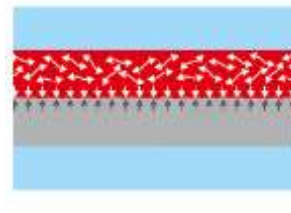
Adhesion refers to the sum of all forces which occur at the interfaces between two substrates, e.g. a surface to be bonded and a pressure-sensitive adhesive. The measurable bond strength of adhesion results from the combination of these physical interactions and the energy dissipation from the pressure-sensitive adhesive's viscoelastic properties.



■ Substrate ■ Pressure-sensitive adhesive

### Cohesion

For the adhesive bond to stay intact, sufficient cohesion (internal strength) of the pressure-sensitive adhesive is required. The cohesion of a pressure-sensitive adhesive describes the elastic behaviour of the adhesive, which in turn has an impact on the shear strength or restoring forces of a bond.



■ Substrate ■ Pressure-sensitive adhesive

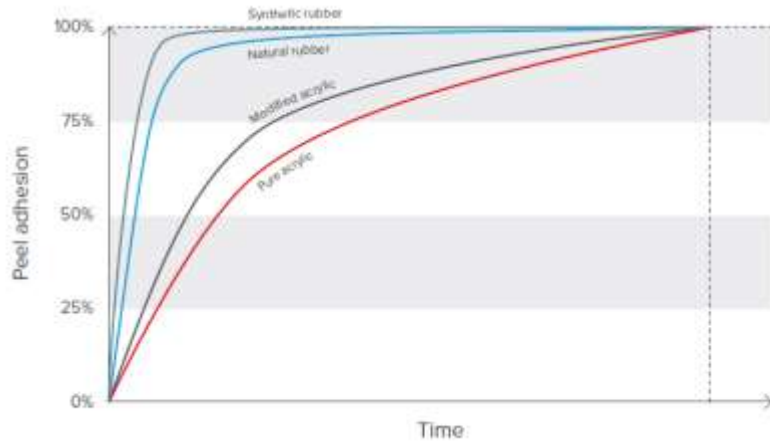
### Adhesive strength

Adhesive strength is described by the interplay of adhesion and cohesion, i.e. only through a certain combination of adhesion and internal strength is an adhesive bond able to withstand the stresses that act on it.

A particular form of adhesion is the **tack**, which determines whether an adhesive mass can quickly wet a surface with which it comes into contact with virtually no pressure. But the tack does not ultimately correlate with the actual bond strength of a pressure-sensitive adhesive. Pressure-sensitive adhesives with a low tack are capable of withstanding high stresses when high final adhesive strength and/or high shear strength are formed.

Therefore, the thumb test (or even finger tack) is not suitable for drawing conclusions about the bond strength of a pressure-sensitive adhesive.

### Initial and ultimate peel adhesion

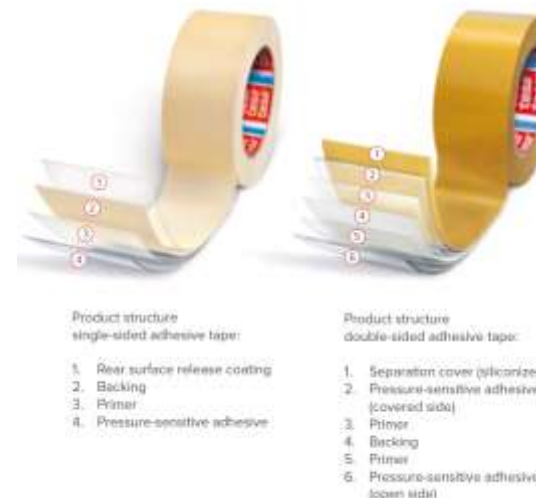


Due to the viscoelastic character of an adhesive tape the peel adhesion increases over time. The time needed to achieve the ultimate peel adhesion strongly depends on factors such as the type of adhesive mass, temperature, contact pressure and substrate. This behavior is described as the initial and ultimate peel adhesion.

As the chart shows, both synthetic and natural rubber pressure-sensitive adhesives require less time to reach the ultimate peel adhesion than acrylic-based pressure-sensitive adhesives. As a rule of thumb, it takes 72 hours to achieve the ultimate peel adhesion of acrylic adhesives. With the use of a bonding agent (adhesion promoter) the time needed to achieve the ultimate peel adhesion is typically reduced.

Higher temperatures also significantly reduce the time needed to achieve the ultimate peel adhesion. At lower processing temperatures, a much longer time is once again required to achieve the ultimate peel adhesion.

### Adhesive tape structure



All adhesive tapes consist essentially of a backing material and at least one self-adhesive layer of adhesive. The product structures shown on the right are typical for single-sided and double-sided adhesive tapes.

The adhesive and backing materials are adapted to the specific application requirements of each tesa® adhesive tape solution. Examples of adhesive masses are acrylics, natural rubber and synthetic rubber.

Examples of backings are film, paper, tissue and foam. In order to help you choose the appropriate adhesive tape, we offer product ranges for the various fields of application. These include, for example, adhesive tapes for surface protection, masking, bundling and permanent bonding in the automotive, electronics, construction or furniture industries.

### Surface tension

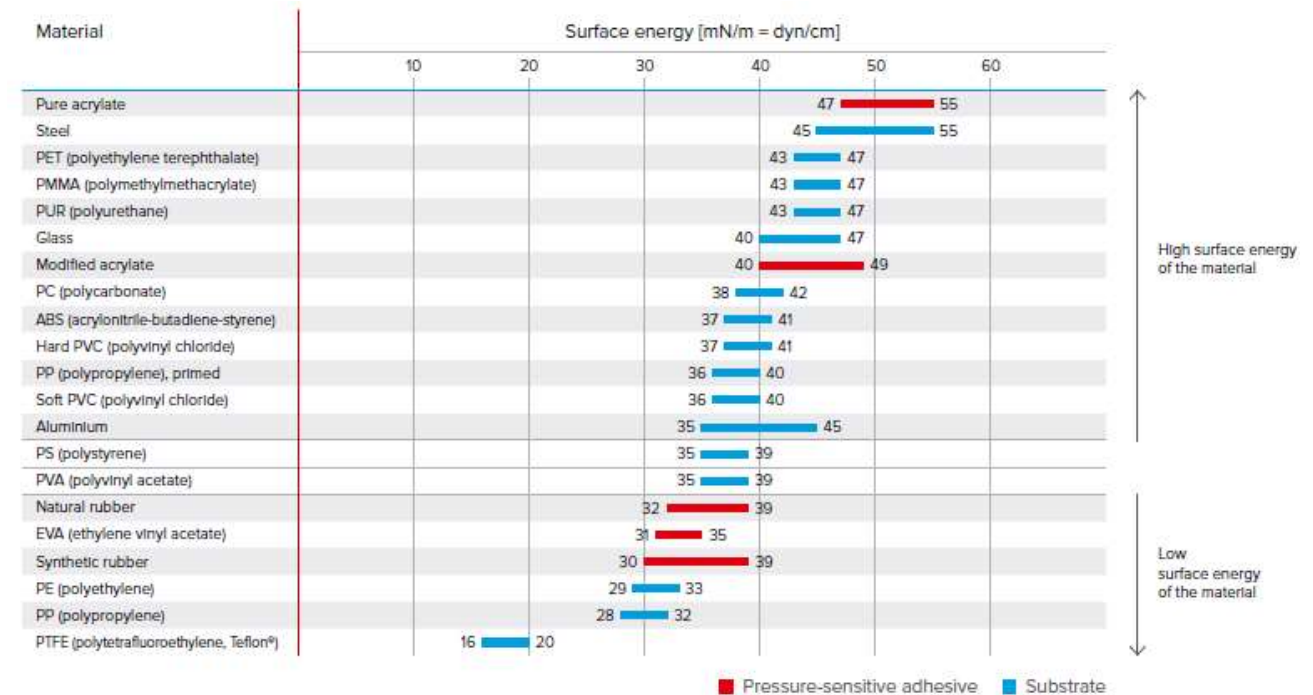
In order to achieve sufficient contact points for the formation of high adhesion forces, the pressure-sensitive adhesive must be able to sufficiently wet the substrate to be bonded. Wetting largely depends on the surface tension or energy of the substrate and the pressure-sensitive adhesive.

A pressure-sensitive adhesive is generally able to wet-out a substrate if the substrate's surface energy is greater than or equal to that of the adhesive. The higher the wet-out, the more contact points are available to form a bond between two surfaces. As a first indication one can use a water droplet to differentiate between high and low surface energy substrates. If the droplet forms a film, this points to a high surface energy. On the other hand, if it stays a droplet or drips off, it points to a lower surface energy than water. In this case, bonding to the substrate may be difficult.

More accurate results are achieved with so-called test inks, which are also available in pen form. The surface energy is given in mN/m, dyn/cm or sometimes also in mJ/m<sup>2</sup>, whereby: 1 mN/m = 1 dyn/cm.

The boundary between low-energy and high-energy surfaces is usually drawn in the range of a surface energy of 36 – 38 mN/m. Therefore, the bondability for surface tensions above this range is usually problem-free, whereas at values below this range a pretreatment of the surface to be bonded should be considered.

Wettability	Poor	Good	Very good
Surface energy	Pressure-sensitive adhesive > Substrate	Pressure-sensitive adhesive = Substrate	Pressure-sensitive adhesive < Substrate





# AUTOMOTIVE TAPE FOR LAMINATION

Double-Sided Adhesive Tape: Scrim, Transfer, Non-woven, and Filmic



## Main Application

- Thin double-sided adhesive tape for **fast** and **efficient** converting processes
- Transfer, non-woven, and filmic double-sided tape for **foam**, **felt**, and **fleece** laminations

## Assortment Properties

- The different technology blocks - from **water- and solvent-born adhesives** in thicknesses from 50 µm to 220 µm - offer a wide-ranging level of performance and design to cost options
- Our double-sided adhesives for lamination and converting applications **offer very Low VOC emissions** judged as **Ultra Low VOC** and **Low VOC**
- Broad portfolio including special **solutions for demanding loads** in the applications



## Main Product Features



High bonding



Good wetting on uneven surfaces



LSE performance



Quick bonding



Chemical resistance



Low Odor



Temperature resistant



Anti-repulsion



Good die-cutting



Qualified according to automotive conditions



Low and Ultra Low VOC

## Best Seller



### tesa® 52105

- Efficient solution for lamination
- Good wet out on all substrates
- Ultra Low VOC

### tesa® 51970

- Strong performance on rough substrates and textiles
- Strong repulsion resistance
- Low VOC

### tesa® 66022

- Suitable for LSE substrates
- Strong repulsion resistance
- Ultra Low VOC

### tesa® 4965

- Strong all-round solution
- High shear resistance
- Low VOC

# AUTOMOTIVE TAPE FOR LAMINATION

## Double-Sided Adhesive Tape: Scrim, Transfer



Product	Thickness [µm]	Color	Liner	Standard log roll width [mm]	Adhesive	Backing	Peel adhesion to steel initial /three days [N/cm]	Temperature resistance short/long term [°C]	Low emission	Description/special features
tesa® <a href="#">75007</a>	75	Transparent	Glassine Brown / Blue logo	1,372	Acrylic	Scrim	7.3/8.6	170/-	LOW VOC	Tape with high conformability and repulsion and humidity resistance
tesa® <a href="#">66007</a>	75	Transparent	Glassine Brown / Blue logo	1,150	Acrylic	Scrim	9.7/12.3	170/-	ULTRA LOW VOC	Tape with high conformability and strong initial performance even on LSE substrates
tesa® <a href="#">66013</a>	130	Transparent	Glassine Brown / Blue logo	1,150	Acrylic	Scrim	15.4/16.5	180/-	ULTRA LOW VOC	Tape with high conformability and strong initial performance even on LSE substrates
tesa® <a href="#">66022</a>	220	Transparent	Glassine Brown / Blue logo	1,150	Acrylic	Scrim	12.3/17.3	200/-	ULTRA LOW VOC	Tape with high conformability and gap-filling properties as well as strong initial performance even on LSE substrates
tesa® <a href="#">52105</a>	50	Transparent	Glassine Yellow	1,480	Acrylic	None	9.2/9.5	170/-	ULTRA LOW VOC	Lamination adhesive suitable for all substrates
tesa® <a href="#">52110</a>	100	Transparent	Glassine Yellow	1,480	Acrylic	None	13/13	180/-	ULTRA LOW VOC	Lamination adhesive suitable for all substrates
tesa® <a href="#">4985</a>	50	Transparent	Glassine Brown	1,270	Acrylic	None	8/11.1 (14 days)	200/80		Temperature-resistant tape with high adhesion to uneven surfaces
tesa® <a href="#">75505</a>	50	Transparent	Glassine Brown	1,372	Acrylic	None	8 (steel initial)	200/100	LOW VOC	Tape with excellent conformability and very good initial adhesion to a variety of substrates
tesa® <a href="#">75507</a>	75	Transparent	Glassine Brown	1,372	Acrylic	None	11 (steel initial)	200/100	LOW VOC	Tape with excellent conformability and very good initial adhesion to a variety of substrates
tesa® <a href="#">75515</a>	125	Transparent	Glassine Brown	1,372	Acrylic	None	12 (steel initial)	200/100	LOW VOC	Tape with excellent conformability and very good initial adhesion to a variety of substrates

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# AUTOMOTIVE TAPES FOR LAMINATION

## Double-sided Adhesive Tapes: Cloth, Nonwoven and Filmic



Product	Thickness [µm]	Color	Liner	Standard log roll width [mm]	Adhesive	Backing	Peel adhesion to steel (initial/14 days...) [N/cm]	Temperature resistance short/long term [°C]	Low emission	Description/special features
tesa® 4934	200	Transparent	Glassine White	1,400	Rubber	Cloth	14.5/24 (14 days)	60/40		High-tack tape with high initial adhesion suitable for rough surfaces
tesa® 4959	100	Translucent	Multiple	1,372	Acrylic	Non-woven	8/8.5	200/80	LOW VOC	Tape with high resistant properties against different ambient influences
tesa® 4962	160	Translucent	Brown glassine	1,362 1,372	Acrylic	Non-woven	11.5/12 (14 days)	200/80	LOW VOC	Tape with high adhesion to different substrates
tesa® 52210	100	Translucent	Glassine Brown	1,000 1,480 1,500	Acrylic	Non-woven	6/11.5	170/-	ULTRA LOW VOC	Tape with high conformability to follow 3D shapes
tesa® 52215	150	Translucent	Glassine Brown	1,000 1,500	Acrylic	Non-woven	6/13	180/-	ULTRA LOW VOC	Tape with high conformability to follow 3D shapes
tesa® 51570	110	Translucent	Glassine Brown	1,400	Rubber	Non-woven	12/13	80/40		High initial bonding tape for LSE substrates and uneven surfaces
tesa® 51571	160	Translucent	Glassine Brown	1,400	Rubber	Non-woven	12.5/13	80/40		High initial bonding tape for LSE substrates and uneven surfaces
tesa® 4942	140	Transparent	Glassine Brown	1,372	Acrylic	PET	10.3/12.7	200/100	LOW VOC	High bonding strength and shear resistance
tesa® 4965	205	Transparent	Multiple	1,372	Acrylic	PET	11.5/11.8	200/100	LOW VOC	Extremely well balanced all-round tape with excellent humidity and ageing resistance
tesa® 4970	225	White	Glassine Brown	1,372	Acrylic	PET	13/13.6	70/60		Tape with excellent adhesion and plasticizer resistance
tesa® 4972	48	Transparent	Glassine Brown / Blue	1,250	Acrylic	PET	7/9.6	200/100		Excellent resistance to demanding environmental conditions and handling performance when converting
tesa® 51966	200	Transparent	Glassine Brown / Blue	1,372	Acrylic	PETP	10.5/11	130/80		Excellent converting properties, fully suitable for long-term applications
tesa® 64993	240	White	PE-coated paper White	1,372	Acrylic	PP	12/12.5	120/-		Superior wet-out performance, excellent gap-filling
tesa® 51970	220	Transparent	Glassine Brown	1,372	Acrylic	PP	13/13.5	130/80		Secure bond even on critical materials such as PP and PE and rough surfaces
tesa® 61395	200	Black	Glassine White with logo	1240	Acrylic	PET	14.3/17	200/100		High shock resistance and very high bonding strength

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# AUTOMOTIVE FOAM TAPE FOR PERMANENT MOUNTING

## Double-Sided Adhesive Tape: Foam



### Main Application



- Globally OEM approved for applications such as for automobiles
  - Exterior emblems, PDC holder, and entry trims
  - Exterior and interior mirror mounting
  - Interior plastic trims and instrument clusters
  - Locator pin mounting on glass
- Suitable if sealing, shock resistance, gap-filling, and dampening is required

### Assortment Properties

- Widely used and utilized because of the conformable closed-cell design for several applications



### Main Product Features



High bonding



Conformable



LSE performance



Good wetting



Chemical resistance



Impact resistance



Compressible



Reliable



Approved and in use

### Best Seller



#### tesa® 649xx Primerless

- For medium- and low-surface-energy plastics and clear coats
- Primerless application
- High initial tack even at low temperatures

#### tesa® 6285x High Temperature

- For medium- and high-surface-energy plastics and clear coats
- High temperature resistance
- High peel adhesion

#### tesa® 625xx

- Excellent wet-out and superior conformability
- Good for gap-filling and sealing
- High foam compression rate

#### tesa® 6290x

- High initial and ultimate adhesion
- Excellent cold-shock performance
- High temperature resistance

# AUTOMOTIVE FOAM TAPE FOR PERMANENT MOUNTING

## Double-Sided Adhesive Tape: Foam



Product	Thickness [µm]	Color	Standard log roll width [mm]	Type of adhesive	Backing	Special features	Description
tesa® <a href="#">64905</a> tesa® <a href="#">64908</a> tesa® <a href="#">64912</a>	500 800 1,200	Black	1,240	LSE adhesive	PE foam	High initial adhesion to LSE and MSE surfaces, ultimate peel adhesion level right after application even at low temperatures, excellent cushioning	<b>Primerless grade</b> for mounting smaller exterior and interior decorative trims, like emblems and lettering like single letters for classification of car models or engine data
tesa® <a href="#">62852</a>	500	Black	1,240	Pure acrylic	PE foam	High ultimate adhesive strength, very good peel adhesion, superior pushout performance, excellent cushioning	<b>High-temperature-performance grade</b> for mounting exterior parts, emblems, nameplates and lettering like single letters for classification of car models or engine data, especially if they have filigree designs or a locator pin on windscreens
tesa® <a href="#">62708</a>	800	Black	1,240	Pure acrylic	PE foam	High ultimate adhesive strength, excellent cushioning, excellent cold-shock performance	<b>High-temperature-performance grade</b> for mounting smaller emblems, lettering, or nameplates
tesa® <a href="#">62904</a> tesa® <a href="#">62906</a>	400 600	Black	1,240	Tackified acrylic	PE foam	High initial and ultimate adhesive strength, excellent cold-shock performance, excellent temperature resistance and cushioning	<b>High-initial-performance grade</b> for mounting exterior and interior trims and mirrors on backplates
tesa® <a href="#">62932</a> tesa® <a href="#">62934</a> tesa® <a href="#">62935</a> tesa® <a href="#">62936</a>	500 800 1,000 1,600	Black/White	1,360	Tackified acrylic	PE foam	High ultimate adhesion strength, immediate adhesion to numerous substrates, suitable for outdoor applications, UV, water, and ageing resistant, excellent cushioning, good initial tack and very good cold-shock absorption	<b>High-initial-performance grade</b> for mounting exterior and interior parts like plastic trims and decorative trims
tesa® <a href="#">62516</a> tesa® <a href="#">62520</a> tesa® <a href="#">62530</a>	1,600 2,000 3,000	Black/White	1,360	Tackified acrylic	PE foam	High ultimate adhesion strength, suitable for outdoor applications, UV, water, and ageing resistant, excellent cushioning, high foam compression rate	<b>General-purpose grade</b> for general mounting, mounting exterior and interior trims, and mounting exterior mirrors with or without a heating element onto the baseplate
tesa® <a href="#">62505</a>	500	Black/White	1,360	Tackified acrylic	PE foam	High ultimate adhesion strength, suitable for outdoor applications, UV, water, and ageing resistant, excellent cushioning, high foam compression rate	<b>General-purpose grade</b> for general mounting, mounting exterior and interior trims, and mounting exterior mirrors with or without a heating element onto the baseplate
tesa® <a href="#">62508</a>	800	Black/White	1,360	Tackified acrylic	PE foam	High ultimate adhesion strength, suitable for outdoor applications, UV, water, and ageing resistant, excellent cushioning, high foam compression rate	<b>General-purpose grade</b> for general mounting, mounting exterior and interior trims, and mounting exterior mirrors with or without a heating element onto the baseplate
tesa® <a href="#">62510</a>	1,000	Black/White	1,360	Tackified acrylic	PE foam	High ultimate adhesion strength, suitable for outdoor applications, UV, water, and ageing resistant, excellent cushioning, high foam compression rate	<b>General-purpose grade</b> for general mounting, mounting exterior and interior trims, and mounting exterior mirrors with or without a heating element onto the baseplate
tesa® <a href="#">66108</a>	800	Black	1,250	Tackified acrylic	PE foam	High initial adhesive strength, excellent cold-shock resistance Superior wet-out performance	<b>General-purpose grade</b> for mounting exterior mirrors with or without a heating element onto the baseplate
tesa® <a href="#">62512</a>	1,200	Black/White	1,360	Tackified acrylic	PE foam	High ultimate adhesion strength, suitable for outdoor applications, UV, water, and ageing resistant, excellent cushioning, high foam compression rate	<b>General-purpose grade</b> for mounting exterior mirrors with or without a heating element onto the baseplate

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# AUTOMOTIVE TAPE FOR ULTIMATE BONDING

## Double-Sided Adhesive Tape: Acrylic Foam



### Main Application



- **Primerless application** on LSE clear coats and plastic parts
- Emblems, decorative-trim parts, body side moldings, fender flares, and many more **exterior attachment parts**
- tesa® ACX<sup>plus</sup> for **display-frame-mounting applications**
- tesa® ACX<sup>plus</sup> for **battery-sealing and gap-filling tape** between cells in ePowertrain

[Click here for approvals of acrylic- and PE-foam tape Assortment](#)



### Main Product Features



High bonding



Conformable



LSE performance



Good wetting



Chemical resistance



Impact resistance



Compressible



Anti-repulsion



Reworkable



Quick bonding

### Best Seller



#### tesa® ACX<sup>plus</sup> 78XX Black Line

- High shear strength and temperature resistance
- Broad market acceptance
- Deep-black color
- Excellent on M&HSE\* substrates

#### tesa® ACX<sup>plus</sup> 778XX Primerless

- Superior bonding of dissimilar LSE\* plastics and materials
- Good initial performance at 5°C
- Faster processes and cost savings
- Environmentally friendly

#### tesa® ACX<sup>plus</sup> 772XX Base Line

- Highly price competitive
- Good conformability
- Excellent on M&HSE\* substrates
- Reliable alternative to PE foams

#### tesa® ACX<sup>plus</sup> 771XX Series

- Acrylic foam with functional adhesive layers
- Excellent shear strength at 90°C
- Superior wet-out performance
- Outstanding on ribbed parts

# AUTOMOTIVE TAPE FOR ULTIMATE BONDING

## Double-Sided Adhesive Tape: Acrylic Foam



Product	Thickness [µm]	Color	Liner	Standard log roll width [mm]	Adhesive	Backing	Peel adhesion to Steel (three days) [N/cm]	Temperature resistance [°C]	Description/special features
tesa® ACX <sup>plus</sup> <u>7805</u>	500	Deep Black	White/Blue	1,260	Modified acrylic	Acrylic foam	18	Unspecified	Cold shock resistance, compensation for different thermal elongation of bonded parts
tesa® ACX <sup>plus</sup> <u>7808</u>	800	Deep Black	White/Blue	1,260	Modified acrylic	Acrylic foam	26	Unspecified	Excellent cold shock performance, color for enhanced appearance and design flexibility
tesa® ACX <sup>plus</sup> <u>7811</u>	1,100	Deep Black	White/Blue	1,260	Modified acrylic	Acrylic foam	32	Unspecified	Excellent cold shock performance, color for enhanced appearance and design flexibility
tesa® ACX <sup>plus</sup> <u>7812</u>	1,200	Deep Black	White/Blue	1,260	Modified acrylic	Acrylic foam	32	Unspecified	Excellent cold shock performance, color for enhanced appearance and design flexibility
tesa® ACX <sup>plus</sup> <u>7815</u>	1,500	Deep Black	White/Blue	1,260	Modified acrylic	Acrylic foam	35	Unspecified	Excellent cold shock performance, color for enhanced appearance and design flexibility
tesa® ACX <sup>plus</sup> <u>77108</u>	800	Black	White/Blue	900	Tackified acrylic	Acrylic foam	29	Unspecified	Excellent shear resistance at elevated temperature
tesa® ACX <sup>plus</sup> <u>77112</u>	1,200	Black	White/Blue	900	Tackified acrylic	Acrylic foam	30	Unspecified	Excellent shear resistance at elevated temperature
tesa® ACX <sup>plus</sup> <u>77115</u>	1,500	Black	White/Blue	900	Tackified acrylic	Acrylic foam	34	Unspecified	Excellent shear resistance at elevated temperature
tesa® ACX <sup>plus</sup> <u>77608</u>	800	Gray	Blue	900	Tackified acrylic	Acrylic foam	25	-40/80	Superior peel-adhesion level right after application
tesa® ACX <sup>plus</sup> <u>77611</u>	1,100	Gray	Blue	900	Tackified acrylic	Acrylic foam	26	-40/80	Superior peel-adhesion level right after application

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# AUTOMOTIVE TAPE FOR ULTIMATE BONDING

## Double-Sided Adhesive Tape: Acrylic Foam



Product	Thickness [µm]	Color	Liner	Standard log roll width [mm]	Adhesive	Backing	Peel Adhesion to Steel (three days) [N/cm]	Temperature resistance [°C]	Description/special features
tesa® ACX <sup>plus</sup> <u>77708</u>	800	Gray	Royal Blue	900	LSE	Acrylic foam	31	-40 to +80	Suitable for a wide range of exterior-attachment part-mounting applications
tesa® ACX <sup>plus</sup> <u>77711</u>	1,100	Gray	Royal Blue	900	LSE	Acrylic foam	31	-40 to +80	Suitable for a wide range of exterior-attachment part-mounting applications
tesa® ACX <sup>plus</sup> <u>77808</u>	800	Gray	Royal Blue	900	LSE	Acrylic foam	31	-40 to +80	Helps to eliminate the primer in the process. Secure bond to typical automotive attachment parts made of LSE plastics without primer
tesa® ACX <sup>plus</sup> <u>77811</u>	1,100	Gray	Royal Blue	900	LSE	Acrylic foam	35	-40 to +80	High initial performance on LSE plastics and difficult-to-bond clear coats without primer
tesa® ACX <sup>plus</sup> <u>77815</u>	1,500	Gray	Royal Blue	900	LSE	Acrylic foam	39	-40 to +80	Excellent bonding stability at an application temperature as low as 5°C
<b>NEW</b> tesa® ACX <sup>plus</sup> <u>77204</u>	400	Gray	White PE coated paper	On demand	Pure acrylic	Acrylic foam	22	-40 to +80	Viscoelastic acrylic foam core compensates stress caused by different thermal elongation of bonded parts
<b>NEW</b> tesa® ACX <sup>plus</sup> <u>77206</u>	600	Gray	White	On Demand	Pure acrylic	Acrylic foam	24	-40 to +80	Viscoelastic acrylic foam core compensates stress caused by different thermal elongation of bonded parts
tesa® ACX <sup>plus</sup> <u>77208</u>	800	Gray	White	900	Pure acrylic	Acrylic foam	24	-40 to +80	Viscoelastic acrylic foam core compensates stress caused by different thermal elongation of bonded parts

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# AUTOMOTIVE HEAT-ACTIVATED TAPE SOLUTIONS

## Double-Sided Adhesive Tape: Structural Bonding



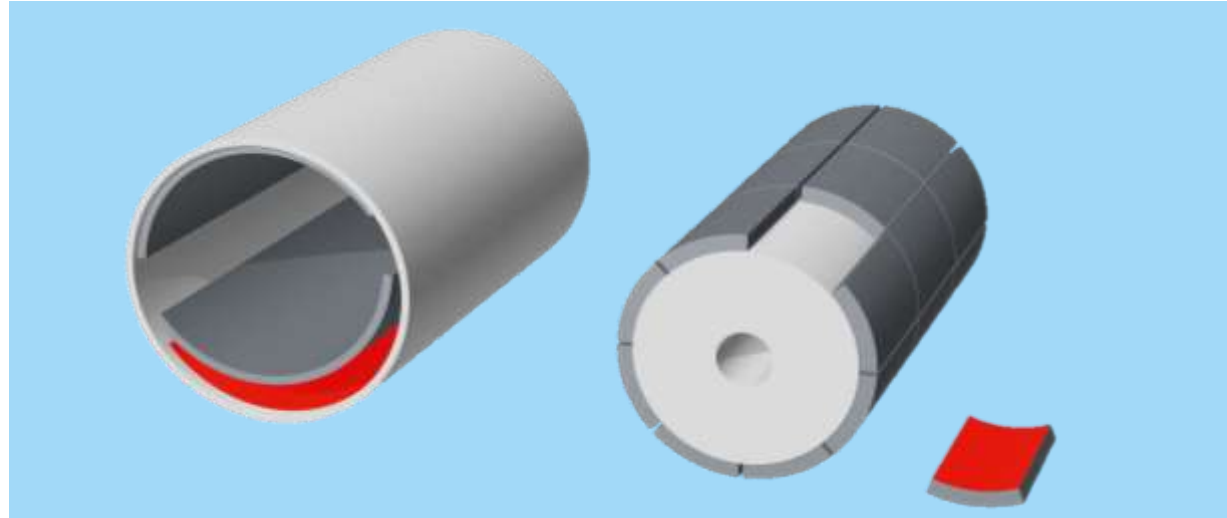
### Main Application



- For automotive applications that require high structural bonding performances and recommended for bonding metal components to various plastic or metal surfaces
- Bonding applications that need to withstand the harshest conditions:
  - FPC in auto electronics
  - Friction materials in clutches
  - Magnets in e-motors
  - Sensors in powertrain

### Assortment Properties

- tesa Heat Activated Films HAF are activated by heat and pressure to reach very high bonding strength



### Main Product Features



>120°C

Activation temperature



Chemical resistance



Oil resistance



Good wetting



Temperature resistance



Suitable for harshest conditions



Low bonding pressure



Impact resistance

### Best Seller



#### tesa® 9410

- Outstanding performance
- Oil and chemical resistance
- Excellent bonding on material with uneven/rough bonding partner

#### tesa® 9456

- Excellent performance at elevated temperatures and humidity
- Oil and chemical resistance
- Excellent bonding on friction-layer material

#### tesa® 9430

- Outstanding performance
- Oil and chemical resistance
- Excellent bonding on material with even and nonporous bonding partner

#### Outlook

- Structural bonding solutions for lower activation temperatures on request

# SPECIFIC PRODUCT ASSORTMENT

## Double-Sided Adhesive Tape: Structural Bonding



Product	Thickness [µm]	Color	Liner	Standard log roll width [mm]	Type of adhesive	Activation temperature	Bonding strength [MPa]	Dynamic shear [N]	Description/special features
tesa® <a href="#">9410</a>	60	Amber	Glassine Brown	1,020	Nitrile rubber/phenolic resin	<120	<5.5	<7.0	Reactive tape with very high structural adhesion and excellent chemical and oil resistance
tesa® <a href="#">9430</a>	45	Amber	Glassine	1,020	Nitrile rubber/phenolic resin	<120	<5.5	<7.0	Reactive tape with very high structural adhesion and excellent chemical and oil resistance
tesa® <a href="#">9405</a>	30	Amber	Glassine	On demand	Nitrile rubber/phenolic resin	<120	<5.5	<7.0	Reactive tape with very high structural adhesion and excellent chemical and oil resistance
tesa® <a href="#">9402</a>	125	Amber	Glassine	On demand	Nitrile rubber/phenolic resin	<120	<5.5	<7.0	Reactive tape with very high structural adhesion, excellent chemical and oil resistance, and very good wetting of rough surfaces
tesa® <a href="#">9401</a>	200	Amber	Glassine	1,020	Nitrile rubber/phenolic resin	<120	<5.5	<7.0	Reactive tape with very high structural adhesion, excellent chemical and oil resistance, and excellent wetting of rough surfaces
tesa® <a href="#">9400</a>	270	Amber	Glassine	On demand	Nitrile rubber/phenolic resin	<120	<5.5	<7.0	Reactive tape with very high structural adhesion, excellent chemical and oil resistance, and excellent wetting of rough surfaces
tesa® <a href="#">9456</a>	60	Amber	PE-coated paper	1,020	Nitrile rubber/phenolic resin	<120	<5.5	<7.0	Reactive tape with very high structural adhesion, excellent chemical and oil resistance, and reduced tackiness at moderate temperatures

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# LSE PLASTIC MOUNTING

## Double-Sided Adhesive Tape: LSE



### Main Application



- Thin PSA for e.g. lamination with foam, felt, non-woven, textiles, or (faux) leather to serve multiple applications on LSE substrates to offer BSR prevention, splinter protection, or mounting decorative materials
- Thick PSA for structural bonding of interior plastic parts in door panels, consoles, and instrument panels as well as exterior-attachment-part mounting

### Assortment Properties

- tesa solutions for LSE substrate provide a cost-efficient, reliable, and strong bonding performance on challenging low-surface-energy substrates
- Selecting the suitable tesa product can eliminate the need for surface treatment like primer, flaming, or plasma treatment



### Main Product Features



High bonding



Conformable



Low bonding pressure



Good wetting



Chemical resistance



Anti-repulsion



Impact resistance



Compressible



LSE performance



Quick bonding

### Best Seller



#### tesa® 92108

- High initial performance
- Strong ultimate bonding performance
- Suitable for bonding different substrates like PP to ABS

#### tesa® 77808

- Superior bonding of dissimilar LSE\* plastics and materials
- Good initial performance at 5°C
- Faster processes and cost savings
- Environmentally friendly

#### tesa® 66022

- Suitable for LSE substrates
- Strong repulsion resistance
- Ultra low VOC

#### tesa® 64912

- Superior performance without primer
- Suitable for LSE and MSE paint systems

# SPECIFIC PRODUCT ASSORTMENT

## Double-Sided Adhesive Tape: LSE



Product	Thickness [µm]	Color	Liner	Standard log roll width [mm]	Adhesive	Backing	Peel adhesion to PP [N/cm] (initial/three days)	Temperature resistance [°C]	Description/special features
tesa® <a href="#">66022</a>	220	Transparent	Brown/Blue Logo	1,150	Acrylic	None	14.0/16.0	200/-	Low VOC and highly conformable to follow 3D shapes
tesa® <a href="#">4965</a>	205	Transparent	Multiple	1,372	Acrylic	Pet	6.8/7.9 (14 days)	200/100	Immediate usability right after assembly, suitability for critical demands such as heavy stress and temperatures
tesa® <a href="#">51970</a>	220	Transparent	Brown	1,372	Acrylic	PP	6.8/8.8 (14 days)	130/80	Good static shear resistance at 23°C and 40°C
tesa® <a href="#">51570</a>	110	Translucent	Brown	1,400	Rubber	Non-woven	7.0/12.0 (14 days)	40/80	Good shear resistance at 23°C
tesa® <a href="#">75507</a>	75	Transparent	Brown	1,372	Acrylic	None	11.0 (initial on steel)	100/200	Excellent static shear resistance at 70°C
tesa® <a href="#">92105</a>	500	Black	Transparent	610	Performance polymer foam	None	25/30	-30°C to 100°C	Low VOC, excellent static shear resistance
tesa® <a href="#">92108</a>	800	Black	Transparent	610	Performance polymer foam	None	28/36	-30°C to 100°C	Low VOC, excellent static shear resistance
tesa® <a href="#">92111</a>	1100	Black	Transparent	610	Performance polymer foam	None	29/40	-30°C to 100°C	Low VOC, excellent static shear resistance
tesa® <a href="#">77805</a>	500	Gray	Royal Blue	900	Acrylic foam	Acrylic foam	26/28	-40 to +80°C	High initial adhesion to LSE and MSE surfaces without primer
tesa® <a href="#">77808</a>	800	Gray	Royal Blue	900	Acrylic foam	Acrylic foam	28/31	-40 to +80°C	High initial adhesion to LSE and MSE surfaces without primer
tesa® <a href="#">77811</a>	1100	Gray	Royal Blue	900	Acrylic foam	Acrylic foam	32/35	-40 to +80°C	High initial adhesion to LSE and MSE surfaces without primer
tesa® <a href="#">77815</a>	1500	Gray	Royal Blue	900	Acrylic foam	Acrylic foam	36/39	-40 to +80°C	High initial adhesion to LSE and MSE surfaces without primer
tesa® <a href="#">64912</a>	1200	Black	Brown	1,240	Rubber	PE foam	20/20 (after 14 days)	-40°C to reliable performance to higher temperatures	High initial adhesion to LSE and MSE surfaces without primer

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# AUTOMOTIVE FLAME-RETARDANT SOLUTIONS

## Double-Sided Adhesive Tape: Flame Retardancy



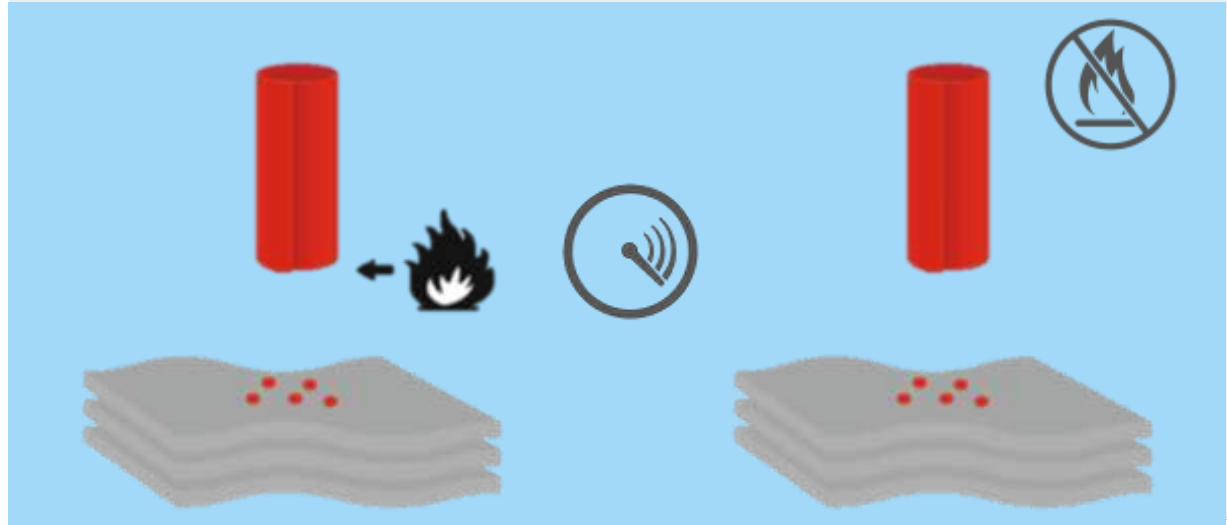
### Main Application

- Special and highly functional flame-retardant adhesives are developed to suit these requirements e.g. in battery applications



### Assortment Properties

- tesa solutions for flame retardancy are specially developed to fulfill the requirements of relevant specifications
- According to **common automotive requirements**, the testing is required in **combination with substrates**
- Flame-retardancy requirements are increasing and, for certain applications, looking for tests that are performed without substrates



### Main Product Features



High bonding



Conformable



Reworkable



Good wetting



Chemical resistance



Anti-repulsion



Impact resistance



Compressible



LSE performance



Quick bonding

### Best Seller



#### tesa® 45001

- Fulfills flame-retardant requirements of building industry
- Strong, reliable bonding on multiple substrates
- Gap-filling and stress dissipation

#### tesa® 45051

- High shear resistance
- Strong, reliable bonding on multiple substrates
- All-rounder with flame-retardant properties



#### tesa® 583xx Series

- Strong, reliable bonding on multiple substrates
- Fulfills different automotive flame-retardant requirements

# SPECIFIC PRODUCT ASSORTMENT

## Double-Sided Adhesive Tape: Flame-Retardant



Product	Thickness [µm]	Color	Liner	Standard log roll width [mm]	Adhesive	Backing	Peel adhesion to steel [N/cm]	FMVSS 302 tape only	UL Norm	Description/special features
tesa® 45001	1,000	White	MOPP Red	1,360	Acrylic	PE foam	19.3/22	SE/NBR Burn rate = 0 mm/min	UL 94 HBF-HF1	Flame-retardant PE-foam tape with excellent bonding strength for permanent mounting in demanding applications
<b>NEW</b> tesa® 45051	200	Transparent	MOPP Red	1,360	Acrylic	PET	12/9	SE/NBR Burn rate = 0 mm/min	UL 94 HBF-HF1	Thin & flexible Excellent converting properties
<b>NEW</b> tesa® 45063	800	White	White	On demand	Acrylic	Acrylic core	34/21	SE/NBR Burn rate = 0 mm/min	UL 94 HBF-HF1	mounting tape for demanding applications Viscoelastic Extra strong bonding Gap filling & shock absorbing
<b>NEW</b> tesa® 45065	1200	White	White	On demand	Acrylic	Acrylic core	35/21	SE/NBR Burn rate = 0 mm/min	UL 94 HBF-HF1	mounting tape for demanding applications Viscoelastic Extra strong bonding Gap filling & shock absorbing
tesa® 58372	50	Transparent	White/Red logo Glassine	1,250	Tackified acrylic	PET	7.1	SE/NBR Burn rate = 0 mm/min	UL94 VTM-0	Flame-retardant tape specially designed for e-mobility applications
tesa® 58373	80	Transparent	White/Red logo Glassine	1,250	Tackified acrylic	PET	7.5	SE/NBR Burn rate = 0 mm/min	UL94 VTM-0	Flame-retardant tape specially designed for e-mobility applications
tesa® 58375	130	Transparent	White/Red logo Glassine	1,250	Tackified acrylic	Non-woven	8.0	SE/NBR Burn rate = 0 mm/min	UL94 VTM-0	Flame-retardant tape specially designed for e-mobility applications

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# ELECTRICALLY CONDUCTIVE SHIELDING AND GROUNDING

## Functionally Conductive Adhesive Tape



### Main Application

- EMI shielding and grounding
- Thermal management



### Assortment Properties

- Filled acrylic adhesive systems with a balance between either electrical conductivity and adhesive properties (ECT) or thermal conductivity (TCT), adhesive, and gap-filling properties
- Simply decide what is most important for your application: bonding performance, conductivity, or both



### Main Product Features



Balanced properties



Anti-repulsion



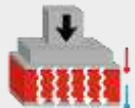
Temperature resistance



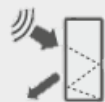
Best conductivity



High bonding



Conductivity



EMI shielding



Abrasion resistance

### Best Seller



#### tesa® ECT 6025x/6026x

- These series provide a balanced performance of conductivity and bonding performance

#### tesa® ECT 6037x

- Highest conductivity in our assortment
- The contact resistance, even in harsh environmental conditions, is extremely low

#### tesa® ECT 6038x

- Best bonding performance in this assortment
- Offers very high peel-adhesion values, and is resistant to repulsive forces

#### tesa® TCT/TIM 5839x

- Excellent thermal conductivity
- Bonding strength with very good wetting and gap-filling properties!

# ELECTRICALLY CONDUCTIVE MATERIALS

## Balanced Conductivity and Bonding Properties



Product	Thickness [µm]	Color	Type	Backing	Peel adhesion to SUS (initial/ultimate) [N/cm]	Contact resistance [mΩ.inch <sup>2</sup> ]	Surface resistance [mΩ.inch <sup>2</sup> ]	Shielding effectiveness [dB]	Product description
tesa® ECT 60251	55	Gray	d/s Tape	Woven	4.6/0.5	0.05	0.2	>50	Balanced conductivity and bonding
tesa® ECT 60252	55	Gray	d/s Tape	Woven	5.5/8.5	0.05	0.2	>50	Balanced conductivity and bonding
tesa® ECT 60253	70	Gray	d/s Tape	Woven	4.8/9.7	0.05	0.2	>50	Balanced conductivity and bonding
tesa® ECT 60254	100	Gray	d/s Tape	Woven	6.6/10.4	0.05	0.2	>50	Balanced conductivity and bonding
tesa® ECT 60255	150	Gray	d/s Tape	Woven	4.5/10.5	0.05	0.2	>50	Balanced conductivity and bonding
tesa® ECT 60256	200	Gray	d/s Tape	Woven	4.6/10.6	0.05	0.2	>50	Balanced conductivity and bonding
tesa® ECT 60257	250	Gray	d/s Tape	Woven	4.8/10.8	0.05	0.2	>50	Balanced conductivity and bonding
tesa® ECT 60264	17	Gray	d/s Tape	Non-woven	3.5/4.5	0.02	0.2	>50	Balanced conductivity and bonding
tesa® ECT 60261	25	Gray	d/s Tape	Non-woven	4.0/5.6	0.02	0.2	>50	Balanced conductivity and bonding
tesa® ECT 60260	35	Gray	d/s Tape	Non-woven	4.0/4.2	0.02	0.2	>50	Balanced conductivity and bonding
tesa® ECT 60262	50	Gray	d/s Tape	Non-woven	5.4/8.3	0.02	0.2	>50	Balanced conductivity and bonding
tesa® ECT 60371	30	Black	d/s Tape	Non-woven	3.5/5.1	0.01	0.1	>60	Best conductivity
tesa® ECT 60372	50	Black	d/s Tape	Non-woven	4.3/5.6	0.01	0.1	>60	Best conductivity
tesa® ECT 60374	100	Black	d/s Tape	Woven	5.7/ 8.5	0.01	0.1	>60	Best conductivity
tesa® ECT 60381	50	Gray	d/s Tape	Woven	8.0/10.0	0.06	0.3	>50	Best bonding
tesa® ECT 60384	100	Gray	d/s Tape	Woven	8.0/10.0	0.06	0.3	>50	Best bonding
tesa® ECT 60382	50	Gray	d/s Tape	Non-woven	8.0/10.0	0.06	0.3	>50	Best bonding
tesa® ECT 60385	100	Gray	d/s Tape	Non-woven	8.0/10.0	0.06	0.3	>50	Best bonding
tesa® ECT 60231	25	Matte Black	s/s Tape	Cond. fabric	3.0/4.1	0.05	0.2	>50	Modern, matte black design
tesa® ECT 60232	35	Matte Black	s/s Tape	Cond. fabric	3.5/4.5	0.05	0.2	>50	Modern, matte black design
tesa® ECT 60234	55	Matte Black	s/s Tape	Cond. fabric	4.5/6.5	0.05	0.2	>50	Modern, matte black design
tesa® ECT 60238	45	Matte Black	s/s Tape	Copper	5.5/7.0	0.05	0.2	>70	Modern, matte black design

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# THERMAL INTERFACE MATERIALS



Good Thermal Conductivity + Excellent Bonding Strength with Very Good Wetting and Gap-Filling Properties

Product	Thickness	Color	Adhesive	Thermal conductivity ASTM D5470	Wet out	Gap-filling	90° Peel adhesion at RT/72h ASTM D3330	Dynamic shear at RT initial/72hr	Die-electric strength ASTM D-149	Product features
tesa® <a href="#">60731</a>	30	White	Acrylic	0.6W/mK	89%	26%	4.3 N/cm		33 kV/mm	Good thermal conductivity and excellent bonding strength with very good wetting and gap-filling properties
tesa® <a href="#">60732</a>	50	White	Acrylic	0.6W/mK	90%	69%	4.7 N/cm		25 kV/mm	Same as above
tesa® <a href="#">60733</a>	100	White	Acrylic	0.7W/mK	92%	93%	5.0 N/cm		20 kV/mm	Same as above
tesa® <a href="#">58394</a>	125	White	Acrylic	0.7W/mK	81%	85%	3.9 N/cm	234N/300N	36 kV/mm	Same as above and with FR UL94-VTM2
tesa® <a href="#">58395</a>	250	White	Acrylic	0.8W/mK	89%	90%	4.1 N/cm	224N/522N	28 kV/mm	Same as above and with FR UL94-V2
tesa® <a href="#">58398</a>	400	White	Acrylic	0.8W/mK	84%	84%	5.4 N/cm	258N/600N	24 kV/mm	Same as above and with FR UL94-V2
 tesa® <a href="#">58326</a>	1200	White	UV-curable	2 W/mK	92%	92%	0,55 N/cm	84N/93N	>13 kV/mm	Very Good thermal conductivity, with FR UL94-V0
 tesa® <a href="#">58327</a>	1500	White	UV-curable	2 W/mK	92%	92%	0,57 N/cm	80N/85N	>13 kV/mm	Very Good thermal conductivity, with FR UL94-V0
 tesa® <a href="#">58328</a>	2000	White	UV-curable	2 W/mK	92%	92%	0,57 N/cm	84N/85N	>13 kV/mm	Very Good thermal conductivity, with FR UL94-V0

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# AUTOMOTIVE DISPLAY SOLUTIONS

## Optically Clear Adhesive and Frame-Mounting Tape

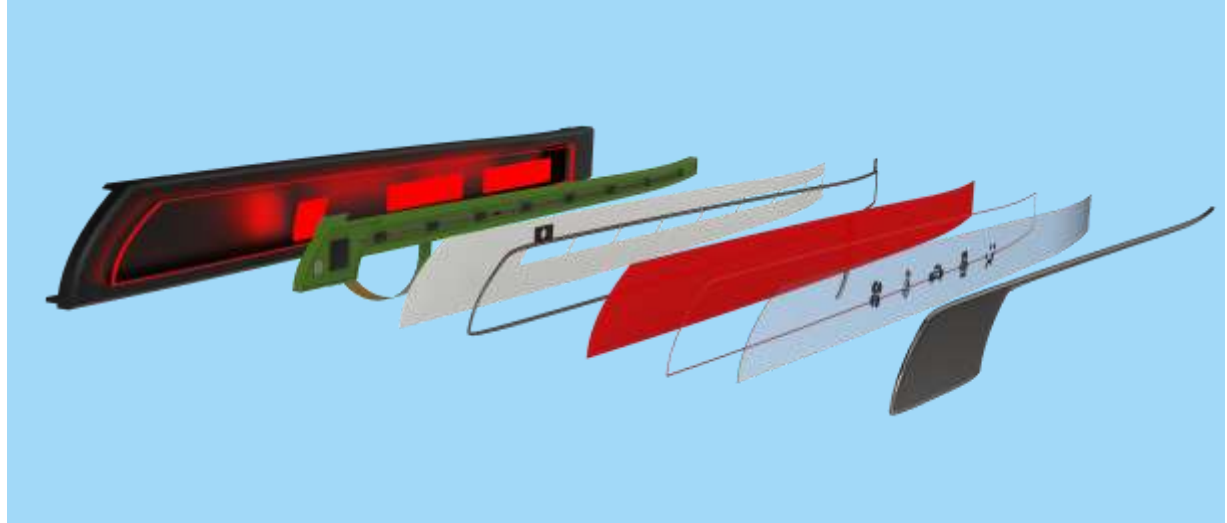


### Main Application

- Bonding of displays and smart surfaces with diverse requirements
- Optically clear bonding of glass and plastic substrates
- tesa ACX<sup>plus</sup> for strong and reliable frame- and housing-mounting applications

### Assortment Properties

- tesa solutions for displays and smart surfaces serve the requirements of the different applications and substrates with dedicated products
- Optically clear tapes suitable for glass and plastic substrates with excellent optical performance
- Specially designed products offer outgassing-resistant performance requested when plastic substrates are in use
- Excellent performance for shock and impact resistance



### Main Product Features



High bonding



UV-curable



Outgassing resistance



Optically Clear



Impact resistance



Chemical resistance



High shear strength

### Best Seller



#### tesa® 69408

- Pressure-sensitive OCA
- Suitable for cover glass, ITO, polarizer
- Easy converting

#### tesa® 69608

- UV-curable OCA
- Suitable for cover glass, ITO, polarizer
- Superior gap-filling

#### tesa® 69808

- UV-curable outgassing-resistant OCA
- Additionally, suitable for plastic cover material
- Superior gap-filling

#### tesa® 7805

- High shear strength and temperature resistance
- High shock resistance
- Deep-black color
- Excellent on-display substrates

# AUTOMOTIVE DISPLAY SOLUTIONS

## Optically Clear Adhesive



Product	Thickness [μm]	Color	Type	Transmission [%]	Haze [%]	Color			R. index	Peel adhesion [N/cm]				Gap-filling [%]	DK at 100 kHz	Young's modules [MP]	Features
						L	a	b		Glass	PET	PC	PMMA				
tesa® 69401	25	Trans-parent	PSA	>99	<0.5	99.95	0.00	0.02	1.48	5.4	4.1	5.9	5.8	10–15	4.9	0.33	PSA and OCA specially modified for laminating films and suitable for touch sensors, polarizers, and glass
tesa® 69402	50	Trans-parent	PSA	>99	<0.5	99.84	0.00	0.03	1.48	6.3	4.3	6.4	6	10–15	4.9	0.33	PSA and OCA specially modified for laminating films and suitable for touch sensors, polarizers, and glass
tesa® 69404	100	Trans-parent	PSA	>99	<0.5	99.70	-0.03	0.08	1.48	6.9	4.8	7	6.2	10–15	4.9	0.33	PSA and OCA specially modified for laminating films and suitable for touch sensors, polarizers, and glass
tesa® 69405	125	Trans-parent	UV-curable	>99	<0.5	99.60	-0.06	0.13	1.48	7.8	5.4	7.7	6.4	10–15	4.9	0.33	PSA and OCA specially modified for laminating films and suitable for touch sensors, polarizers, and glass
tesa® 69604	100	Trans-parent	UV-curable	>99	<0.5	99.50	-0.04	0.04	1.48	12.2	9.4	15.1	13.2	30	4.5	0.29	UV-cured OCA with excellent wet out and gap-filling for cover-glass lamination
tesa® 69606	150	Trans-parent	UV-curable	>99	<0.5	99.30	-0.05	0.06	1.48	14.4	10.4	17.1	15.5	30	4.5	0.29	UV-cured OCA with excellent wet out and gap-filling for cover-glass lamination
tesa® 69804	100	Trans-parent	UV-curable	>99	<0.5	99.60	-0.06	0.12	1.48	11.7	7.9	13.2	12.5	30	4.7	1.0	UV-cured OCA with excellent wet out and gap-filling. Suitable for plastic covers due to excellent outgassing resistance.
tesa® 69806	150	Trans-parent	UV-curable	>99	<0.5	99.40	-0.08	0.18	1.48	13.3	8.4	15.3	14.1	30	4.7	1.0	UV-cured OCA with excellent wet out and gap-filling. Suitable for plastic covers due to excellent outgassing resistance.
tesa® 69808	200	Trans-parent	UV-curable	>99	<0.5	99.10	-0.11	0.21	1.48	16.4	9.3	16.5	17.1	30	4.7	1.0	UV-cured OCA with excellent wet out and gap-filling. Suitable for plastic covers due to excellent outgassing resistance.
tesa® 69802	50	Trans-parent	UV-curable	>99	<0.5	99.90	-0.05	0.06	1.48	9.0	6.1	9.8	9.5	30	4.7	1.0	UV-cured OCA with excellent wet out and gap-filling. Suitable for plastic covers due to excellent outgassing resistance.

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# AUTOMOTIVE DISPLAY SOLUTIONS

## Frame-Mounting Tape



Product	Thickness [μm]	Color	Type	Peel adhesion [N/cm]				Features
				PC	Steel	Glass	Aluminum	
tesa® <u>7805</u>	500	Black	ACX <sup>plus</sup>	40	11	40	28	Display-frame and housing-mounting tape with high shear resistance and excellent compensation for thermal expansion of parts. Strong performance on common display substrates.
tesa® 61057	350	Black	ACX <sup>plus</sup>	34	19	18	16	Display-frame and housing-mounting tape with high shear resistance and excellent compensation for thermal expansion of parts. Strong performance on common display substrates.
tesa® <u>61058</u>	400	Black	ACX <sup>plus</sup>	38	22	16	13	Display-frame and housing-mounting tape with high shear resistance and excellent compensation for thermal expansion of parts. Strong performance on common display substrates.

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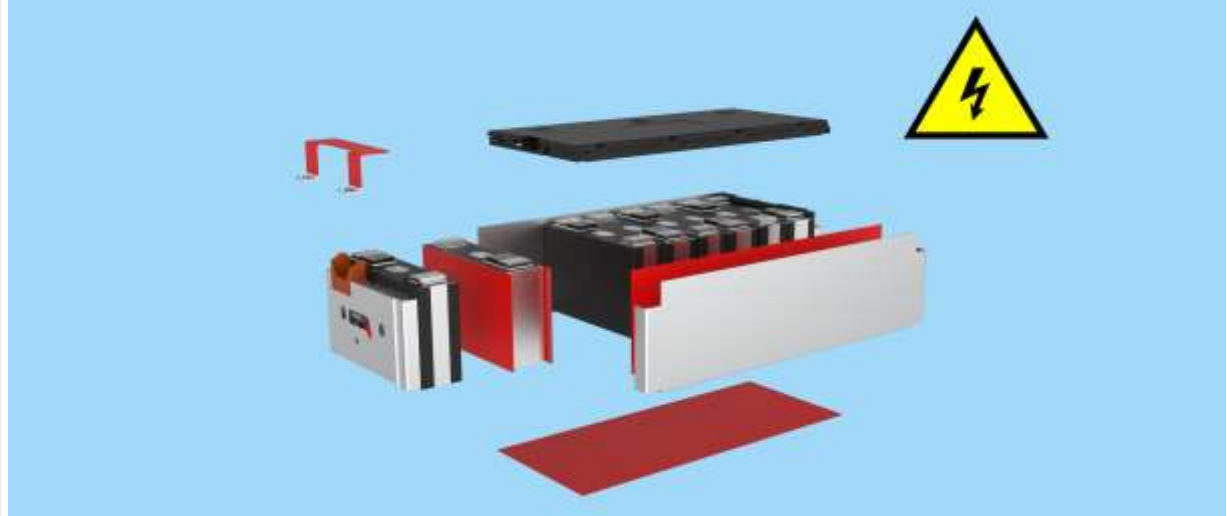
# AUTOMOTIVE E-MOBILITY SOLUTIONS

## Electrical-Insulation Tape for E-Mobility Applications



### Main Application

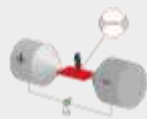
- Reliable electrical insulation for:
  - Battery cells
  - Battery modules
  - Power electronic devices
- Wrapping prismatic cells
- Covering Cooling plates, bus bars and other metal parts



### Main Product Features



Flame retardant



Electric breakdown



Anti-repulsion



Temperature resistance



Tear resistance



High bonding



### Best Seller



#### tesa® 58353

- 85 µm PET electrical-insulation tape
- Reliable adhesion even in when folding over edges

#### tesa® 58358

- 220 µm PET electrical-insulation tape
- Covering EV battery metal parts
- Superior protection against mechanical stress through thick PET backing

#### tesa® 64250

- 79 µm PP electrical-insulation tape
- Excellent conformability even in complex geometries

# SPECIFIC PRODUCT ASSORTMENT

## Electrical-Insulation Tape for E-Mobility Applications



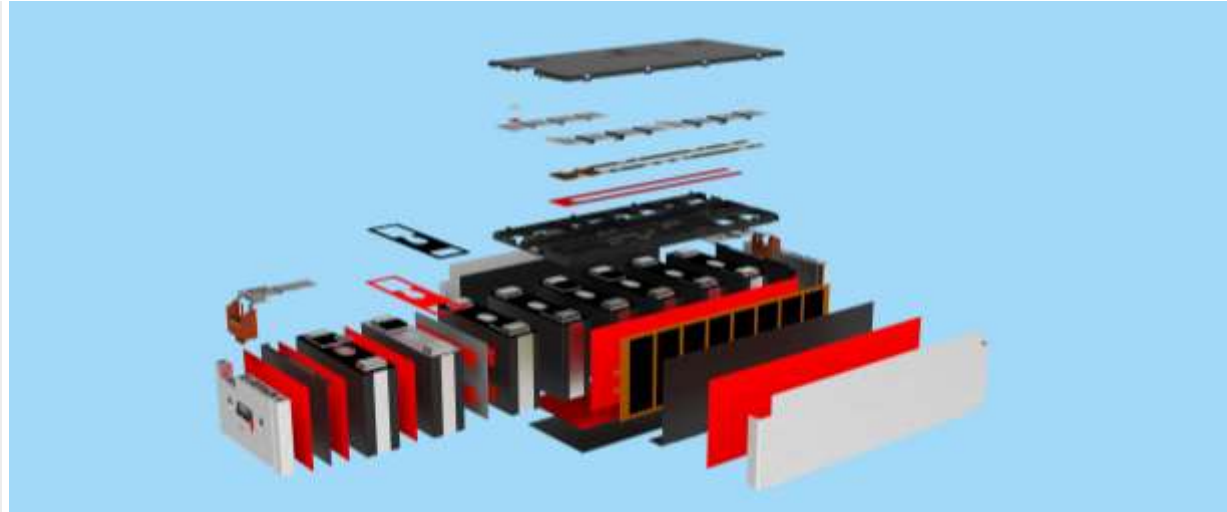
Product	Thickness [µm]	Color	Liner	Standard log roll width [mm]	Adhesive	Backing	Dielectric-breakdown voltage [kV]	Surface and volume resistance [Ω] / [Ω*cm]	Peel adhesion, steel, initial /180 ° [N/cm]	Description/special features
tesa® <u>58353</u>	85	Black	PE-coated paper	1,372	Tackified acrylic	PET	>7	>10 <sup>13</sup> / > 10 <sup>14</sup>	6	Strong PET backing for reliable protection. Reworkable up to 24h  Very suitable for bending around edges
tesa® <u>58358</u>	220	Black	Glassine paper	1,372	Tackified acrylic	PET	>8	>10 <sup>13</sup> / > 10 <sup>14</sup>	15.3	Extra thick PET backing to counter mechanical stress and provide reliable protection against dielectric breakdown
tesa® <u>64250</u>	79	Transparent Blue	n/a	1,300	Tackified acrylic	PP	>7	>10 <sup>13</sup> / > 10 <sup>14</sup>	3	Very suitable for bending around edges
tesa® <u>7100</u>	100	Black	Glassine paper	1,250	Tackified acrylic	PET	>4	>10 <sup>13</sup> / > 10 <sup>14</sup>	7.5	Reliable standard protection against dielectric breakdown
tesa® <u>7250</u>	50	Black	n/a	1,250	Tackified acrylic	PET	>4	>10 <sup>13</sup> / > 10 <sup>14</sup>	4.2	Reliable standard protection against dielectric breakdown

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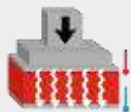


### Main Application

- Mounting and lamination applications in EV battery modules
  - Mounting flexible printed circuits and heating plates
  - Mica- and Polycarbonate-sheet mounting
  - Module-frame mounting
  - Cell-to-cell-mounting



### Main Product Features



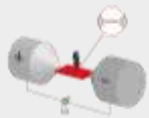
Conductivity



Good die-cutting



High bonding



Electric breakdown



Flame retardant



### Best Seller



#### tesa® 58323

- 75 µm PET non-woven acrylic d/s tape
- Perfect mounting and lamination of flexible printed circuits (FPC) and heating plates in EV batteries

#### tesa® 4982

- 100 µm PET acrylic d/s tape
- Mounting of mica- and PC-insulation sheets on and between battery cells

#### tesa® 58372

- 50 µm PET flame-retardant acrylic d/s tape
- Excellent mounting of battery parts that need extra protection in case of fire

# SPECIFIC PRODUCT ASSORTMENT

## Mounting Tape for E-Mobility Applications



Product	Thickness [µm]	Color	Liner	Standard log roll width [mm]	Adhesive	Backing	Peel adhesion, steel, initial/180° [N/cm]	Dynamic shear resistance, steel/steel, initial [MPa]	Dielectric-breakdown voltage [kV]	Description/special features
tesa® <a href="#">58323</a>	75	White translucent	Glassine paper	1,250	Tackified acrylic	PET non-woven	6.0	1.6	>1.5	Non-woven backing for excellent conformability
tesa® <a href="#">4972</a>	48	Transparent	Glassine paper	1,250	Tackified acrylic	PET film	7.0	1.6	>4	Strong PET backing for robust & reliable bonding
tesa® <a href="#">4980</a>	80	Transparent	Glassine paper	1,250	Tackified acrylic	PET film	8.6	1.6	>4	Strong PET backing for robust & reliable bonding
tesa® <a href="#">4982</a>	100	Transparent	Glassine paper	1,372	Tackified acrylic	PET film	8.2	1.6	>4	Strong PET backing for robust & reliable bonding
tesa® <a href="#">4942</a>	140	Transparent	Glassine paper	1,372	Tackified acrylic	PET film	10.3	1.6	>4	Strong PET backing for robust & reliable bonding
tesa® <a href="#">4965</a>	205	Transparent	Glassine paper	1,372	Tackified acrylic	PET film	11.5	1.6	>4	Strong PET backing for robust & reliable bonding
tesa® <a href="#">58372</a>	50	Transparent	Glassine paper	1,250	Tackified acrylic (FR)	PET film (FR)	7.1	1.2	>3	Flame-retardant in accordance with UL94 VTM-0
tesa® <a href="#">58373</a>	80	Transparent	Glassine paper	1,250	Tackified acrylic (FR)	PET film (FR)	7.5	1.2	>4	Flame-retardant in accordance with UL94 VTM-0
tesa® <a href="#">58375</a>	130	White translucent	Glassine paper	1,250	Tackified acrylic (FR)	PET non-woven (FR)	8.0	1.0	>4	Flame-retardant in accordance with UL94 VTM-0

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# AUTOMOTIVE E-MOBILITY SOLUTIONS

## Highly Dynamic Shear Tape for E-Mobility Applications



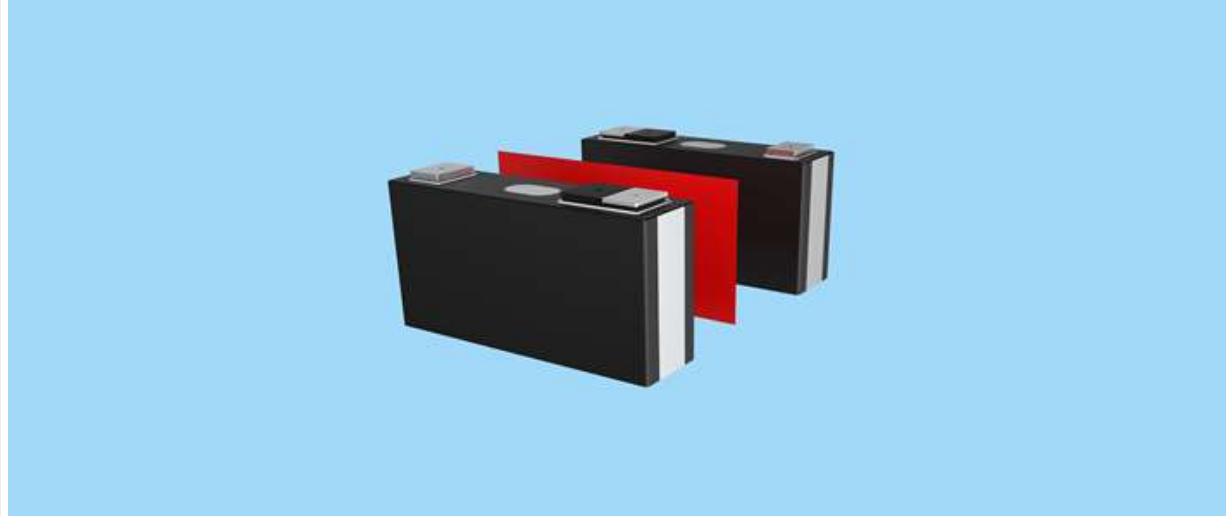
### Main Application

- Cell-to-cell mounting for cell-to-pack design
- Other demanding mounting applications with a shear-resistance requirement



### Assortment Properties

- High bonding performance or shear resistance due to the introduction of CTP (cell-to-pack design) for increasing volume utilization, production efficiency, and energy density by reducing the number of components and enlarging the battery-cell dimensions



### Main Product Features



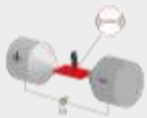
Good die-cutting



High shear strength



Tear resistance



Electric breakdown



High bonding

### Best Seller



#### tesa® 58360

- 50 µm PET d/s transparent tape
- Tackified acrylic adhesive, equipped with 12 µm PET backing

#### tesa® 58363

- 150 µm PET d/s transparent tape
- Tackified acrylic adhesive, equipped with 100 µm PET backing

#### tesa® 58364

- 200 µm PET d/s transparent tape
- Tackified acrylic adhesive, equipped with 100 µm PET backing

# SPECIFIC PRODUCT ASSORTMENT

## Highly Dynamic Shear Tape for E-Mobility Applications



Product	Thickness [µm]	Color	Liner	Standard log roll width [mm]	Adhesive	Backing	Peel adhesion, steel, initial/180° [N/cm]	Dynamic shear resistance, blue PET/blue PET, initial [MPa]	Dielectric-breakdown voltage [kV]	Dynamic shear resistance, blue PET/blue PET, after aging* [MPa]	Description / Special Feature
tesa® 58333	30	Transparent	Glassine paper	1,250	Tackified acrylic	/	6.0	>2	/	>2	High dynamic shear mounting tape for mounting of EV battery cells
tesa® 58360	50	Transparent	Glassine paper	1,250	Tackified acrylic	12 µm PET film	7.0	>2	5.5	>2	High dynamic shear mounting tape for mounting of EV battery cells
tesa® 58362	100	Transparent	Glassine paper	1,250	Tackified acrylic	50 µm PET film	7.0	>2	9.8	>2	High dynamic shear mounting tape for mounting of EV battery cells
tesa® 58363	150	Transparent	Glassine paper	1,250	Tackified acrylic	100 µm PET film	6.5	>2	14.8	>2	High dynamic shear mounting tape for mounting of EV battery cells
tesa® 58364	200	Transparent	Glassine paper	1,250	Tackified acrylic	100 µm PET film	10.4	>2	14.4	>2	High dynamic shear mounting tape for mounting of EV battery cells

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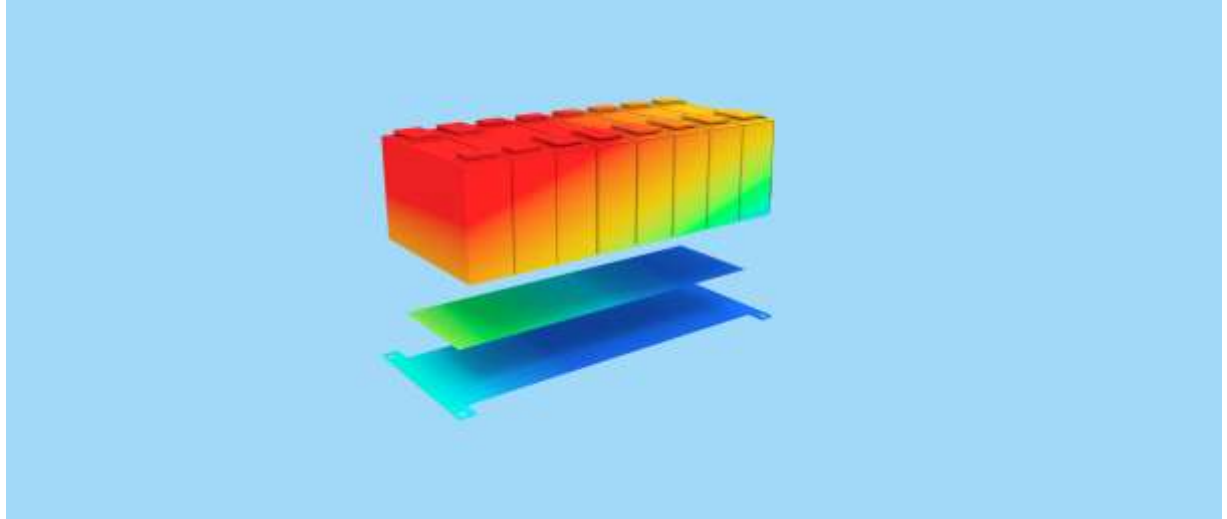
### Main Application

- Heat-transfer interface to the cooling plate in automotive applications
  - Power-electronic modules
  - High-performance onboard computers
  - LiDaR optics



### Assortment Properties

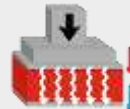
- Silicon-free/no silicone-oil out-gassing
- Good thermal conductivity
- Ideal for thin bonding applications
- Excellent dielectric-breakdown resistance
- RoHS and REACH compliance
- Halogen-free



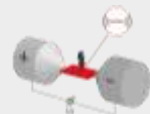
### Main Product Features



High bonding



Conductivity



Electric breakdown

### Best Seller



#### tesa® 58394

- 125 µm thermally conductive transfer tape

#### tesa® 58395

- 250 µm thermally conductive transfer tape

#### tesa® 58398

- 400 µm thermally conductive transfer tape

# SPECIFIC PRODUCT ASSORTMENT

## Thermally Conductive Tape



Product	Thickness [μm]	Color	Liner	Log-roll dimension [m x mm]	Adhesive	Backing	Peel adhesion, steel, 72hr/90° [N/cm]	Thermal conductivity ASTM D5470 [W/mK]	Dielectric-breakdown voltage [kV]	Description/special features
tesa® <u>58394</u>	125	White	Paper	1,000	Tackified acrylic	/	4.8	0.7	4.1	Acrylic-based, tacky and soft thermal interface material
tesa® <u>58395</u>	250	White	Paper	1,000	Tackified acrylic	/	5.8	0.8	7.4	Acrylic-based, tacky and soft thermal interface material
tesa® <u>58398</u>	400	White	Paper	1,000	Tackified acrylic	/	6.7	0.8	9.8	Acrylic-based, tacky and soft thermal interface material

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# AUTOMOTIVE SURFACE-PROTECTION SOLUTIONS

## Temporary and Permanent



### Main Application



- **Protection** against contamination of and damage to sensitive interior or exterior surfaces including clear coats, metals, plastics, and textiles during assembly, transport, finishing, and production processes

### Assortment Properties

- Resistant to environmental and mechanical impacts are temporary and permanent
- Fulfilling to the variety of high-level market demands and customer requirements
- Evaluated, approved, and reliably in use for thousands of parts in different industries around the world



### Main Product Features



UV resistance



Weather resistance



Environmental resistance



Conformable



No scratches



Anti-corrosion



Approved and in use



Approved



Reworkable



No ghosting

### Best Seller



#### tesa® 50560

- Exterior
- Glossy plastics
- No ghosting

#### tesa® 51136

- Interior
- Multiple surfaces
- Mechanical resistance

#### tesa® 50535

- Transport protection
- Clear coats
- No residue

#### tesa® 51207

- Gliding tape
- Plastics
- No scratches and squeaking noises

# AUTOMOTIVE SURFACE-PROTECTION SOLUTIONS

## Single-Sided Adhesive Tape: Filmic



Product	Thickness [µm]	Color	Liner	Standard log-roll width [mm]	Adhesive	Backing	Description/special features
tesa® <a href="#">50530</a> PV3	79	White	No	1,400	Eva	Polyolefin film	Temporary OEM paint protection
tesa® <a href="#">50535</a> PV7	61	White	No	1,400	Eva	Polyolefin film	Temporary OEM paint protection
tesa® <a href="#">50560</a> PV1	52	White	No	1,400	Pib	Polyolefin film	For sensitive and glossy plastic such as PMMA, SAN, ABS ...
tesa® <a href="#">50551</a>	70	Transparent	No	1,550	Acrylic	PE film	For aluminum and painted surfaces
tesa® <a href="#">4848</a> PV1	48	Transparent	No	1,000	Acrylic	PE film	For anodized aluminum
tesa® <a href="#">51136</a>	105	Green translucent	No	1,450	Acrylic	PE film	For sensitive polar and nonpolar surfaces even at demanding 3D geometries. Stronger PV2 adhesive
tesa® <a href="#">51134</a>	84	Transparent	No	9,80	Acrylic	PE film	Similar to tesa® 51136
tesa® <a href="#">7133</a>	80	Blue	No	1,200 1,650	Rubber	PP film	For rough glass and sensitive polar and nonpolar surfaces
tesa® <a href="#">4289</a>	144	Yellow	No	1,650	Rubber	MOPP	High tensile strength with low elongation and good abrasion resistance
tesa® <a href="#">64250</a>	79	Blue translucent	No	1,300	Acrylic	MOPP	Good tensile strength combined with conformability even at demanding 3D geometries
tesa® <a href="#">51207</a>	114	Black transparent	Yes	510	Acrylic	PE-UHWM	UV-resistant gliding tape, against friction between components tesa® 51217 black tesa® 51206 transparent without UV resistance
tesa® <a href="#">52994</a>	260	Transparent	Yes	1,245	Acrylic	PU	PU stone-chip protection film with high UV resistance

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# AUTOMOTIVE MASKING SOLUTIONS

## Paper and Filmic Masking



### Main Application

- **Masking tape** for paint or other finishing processes covering multiple applications, industries, and environments

### Assortment Properties

- The assortment includes general paper masking products, fine-line tape, and specialty tape as well, fulfilling the variety of high-level market demands and customer requirements
- Products are evaluated, approved, and reliably in use for thousands of parts in different industries globally



### Main Product Features

Environmental resistance	Conformable	Curved lines	Straight lines	Residue free
Approved	Approved and in use	Temperature resistance	Reworkable	Tear resistance



### Best Seller



#### tesa® 4174

- Filmic fine-line tape
- Conformable
- Universal

#### tesa® 4341

- Paper masking tape
- Excellent adhesion
- Excellent tear resistance

#### tesa® 4330

- Special masking tape
- For wet-grinding

#### tesa® 4332

- Special masking tape
- For sandblasting

# AUTOMOTIVE MASKING SOLUTIONS

## Single-Sided Adhesive Tape: Paper and Filmic



Product	Thickness [µm]	Color	Liner	Standard log roll width [mm]	Adhesive	Backing	Temperature resistance [°C]	Description/special features
tesa® <u>7140</u>	168	Yellow	No	1,050	Rubber	PVC	170	Highly tear-resistant masking tape
tesa® <u>4174</u>	110	Olive	No	1,240 1,240	Rubber	PVC	150	Universal and conformable fine-line tape
tesa® <u>4244_PV2</u>	140	Yellow	No	1,020	Rubber	PVC	140	Conformable fine-line tape with strong adhesion
tesa® <u>50777</u>	132	Blue	No	1,220	Acrylic	PVC	160	Highly temperature-resistant fine-line tape with an acrylic adhesive
tesa® <u>50600</u>	80	Green	No	960 1,250	Silicone	PETP	220 (for 30 min.)	PET masking tape for temperature up to 220°C with silicone adhesive
tesa® <u>4341</u>	190	Brown	No	1,600	Rubber	Slightly creped paper	140	Masking tape with excellent adhesion and tear resistance
tesa® <u>4330</u>	175	Brown	No	970	Rubber	Slightly creped paper	160	Conformable and wet-grinding masking tape
tesa® <u>4432</u>	330	Brown	No	1,020	Rubber	Flat paper	100	Medium-grade paper stencil masking tape for sandblasting applications

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### Main Application



- Wide range of applications including mounting, repairing, bundling, wrapping, damping, noise-reducing, etc.

### Assortment Properties

- **Fabrics** are one of our key competences and in use for multiple applications, industries, and environments
- The assortment includes general-purpose products in different grades, but as well special combinations of backing properties, adhesives, and finishings as well
- Some of these products have an outstanding level of performance and range of features, which makes them market leaders
  - Products are evaluated, approved, and reliably in use for thousands of parts in different industries around the world
- **Special backings** support the tape performance with their unique characteristics



### Main Product Features



UV resistance



Weather resistance



Environmental resistance



Temperature resistance



Chemical resistance



Anti-repulsion



Approved



Approved and in use



Conformable



Reworkable



Hand tearable

### Best Seller



#### tesa® 4657

- Stress-resistant coated cloth
- Known in the market as „the gray tape“
- Strong adhesion

#### tesa® 4651

- Flexible premium cloth
- Strong adhesion
- Different colors

#### tesa® 50118

- Low VOC
- Strong acrylic adhesive
- PET fleece

#### tesa® 4688

- PE extruded cloth
- Repairing tape
- Different colors

# AUTOMOTIVE MULTIPURPOSE SOLUTIONS

## Single-Sided Adhesive Tapes: Cloth, Filmic, Fleece, Aluminum and Laser Labels



Product	Color	Liner	Standard log-roll width [mm]	Adhesive	Backing	Peel adhesion to steel [N/cm]	Temperature resistance [°C]	Description/special features
tesa® <a href="#">4657</a>	Gray	No	965	Rubber	Acrylic-coated cloth	4.6	180	Special high-temperature cloth, ageing resistant. PV1 for easy unwinding
tesa® <a href="#">4651</a>	Black, White, Yellow, Red, Gray, Brown	No	970	Rubber	Acrylic-coated cloth	3.3	140	Premium cloth, flexible and conformable
tesa® <a href="#">4671</a>	Black, White, Red, Gray, Neon Yellow, Green, Orange, Pink	No	1,540 1,540	Rubber	Acrylic-coated cloth	3.5	140	Premium cloth "gaffer tape," flexible and conformable, matte surface
tesa® <a href="#">4541</a>	Black, White	No	1,140	Rubber	Cloth	3.6	130	Premium-uncoated cloth, flexible and conformable
tesa® <a href="#">53799</a>	Silver, Red, Blue, Dark Green	No	1,300	Rubber	PE-extruded cloth	3.6	130	Mid-grade cloth, flexible and conformable
tesa® <a href="#">4688</a>	Black, White, Red, Blue, Silver	No	1,300	Rubber	PE-extruded cloth	4.5	110	Mid-grade cloth, "repairing tape"
tesa® <a href="#">51036</a>	Black	No	1,140	Acrylic	PET cloth	3.0	150/3000h	Abrasion-resistant PET cloth
tesa® <a href="#">68000</a>	Silver	Yes	1,130	Acrylic	Aluminum-glass cloth	6.0	>500	Heat-reflecting glass cloth
tesa® <a href="#">50204</a>	Blue translucent	Yes	1,240	Acrylic	Filmic/non-woven	-	200	High-tack and good-shear filmic bonding, low VOC
tesa® <a href="#">50118</a> PV1	Black, White	Yes	1,050	Acrylic	PET fleece	-	160	Noise-damping PET fleece with high adhesion to PET, low VOC
tesa® <a href="#">51608</a>	Black	No	1,140	Rubber	PET fleece	3.0	105	Noise-damping PET fleece
tesa® <a href="#">60632</a>	Silver	Yes	1,200	Acrylic	Aluminum	8.0	160	30µm, conformable to curved surfaces
tesa® <a href="#">60652</a>	Silver	Yes	1,170	Acrylic	Aluminum	9.0	160	50µm, mechanically stable and conformable
tesa® <a href="#">60672</a>	Silver	Yes	1,170	Acrylic	Aluminum	10.0	160	75µm, mechanically stable
tesa® <a href="#">6930</a>	Black, Silver, White	Yes	300	Acrylic	Acrylic	1.8	120	Security-laser-markable label where tampering is evident: manipulation leaves visible trace
tesa® <a href="#">6940</a>	Black, Yellow, Red	Yes	300	Acrylic	Acrylic	1.8	120	Security-high-speed-laser-markable label where tampering evident: manipulation leaves visible trace

1. The values in this section should be considered representative or typical only and should not be used for specification purposes. 2. tesa® products prove their impressive quality day in, day out, in demanding conditions and are regularly subjected to strict controls. All information and recommendations are provided to the best of our knowledge on the basis of our practical experience. Nevertheless, 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. Therefore, 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. 3. Measurements were conducted in tesa accordance with internal test methods in standard lab conditions.

# AUTOMOTIVE BUZZ SQUEAK & RATTLE PREVENTION SOLUTIONS

## Single-Sided Specialties



### Main Application

- Noise reduction, primarily in automotive interior application.
- Increased need for BSR prevention due to e-mobility and reduced motor noises



### Assortment Properties

- **Excellent noise damping** properties acc. to automotive standards
- Excellent conformability
- **Suitable abrasion performance**
- Well-balanced adhesion for common automotive interior substrates such as plastics and metals.
- Provide a proven performance using backings that are approved by most global OEMs



### Main Product Features



Good wetting



Balanced properties



Environmental resistance



Temperature resistance



Chemical resistance



Anti-repulsion



Approved



Approved and in use



Conformable



Reworkable



Noise reduction

### Best Seller



#### tesa® 603xx

- Automotive industry proven and accepted adhesive and backings
- Broad thickness range
- Excellent BSR prevention properties

#### tesa® 50118PV1

- Ultra Low VOC Adhesive
- Strong acrylic adhesive
- PET fleece for balanced conformability and BSR prevention

#### tesa® 512xx

- Gliding tapes for anti squeak performance
- acrylic adhesive
- PET fleece

#### Outlook

- A range of doublesided tapes is available for lamination purpose
- New transfer assortment 755xx launched e.g. 75507 - 75µm

# AUTOMOTIVE BUZZ SQUEAK & RATTLE PREVENTION SOLUTIONS

## Single-Sided Specialties



Product	Thickness [µm]	Color	Liner	Standard log roll width [mm]	Adhesive	Backing	Peel Adhesion on steel [N/cm]	Temperature Resistance [°C]	Description / Special Feature <small>are measured according to SAE 2192 / ISO 6722 norms</small>
tesa® 60303	230	Black	PET	1140	Acrylic	PET fleece	4	160°C	Noise damping class C and abrasion resistance class A.
tesa® 60307	480	Black	PET	1140	Acrylic	PET fleece	3	160°C	Noise damping class D and abrasion resistance class C
tesa® 60310	525	Black	PET	1140	Acrylic	PA velours	3	160°C	Noise damping class E and abrasion resistance class D
tesa® 50118PV1	540	White	Glassine	1050	Acrylic	PET fleece	8.5 (on PET)	160°C	Noise damping class C
tesa® 50118PV2	540	White	Glassine	1050	Modified Acrylic	PET fleece	3.5 (on PE)	160°C	Noise damping class C
tesa® 50128	390	Black	Glassine	500	Modified Acrylic	PP non woven	4 (on PE)	160°C	Available on demand
tesa® 51026	260	Black	none	1150	Acrylic	PET cloth	5.5	150°C	Noise damping class A and abrasion resistance class D
tesa® 51036	260	Black	none	1140	Acrylic	PET cloth	5	150°C	Noise damping class A and abrasion resistance class D
tesa® 4651	310	Grey	None	965	Rubber	acrylic-coated cloth	3.3	130°C	Available on demand
tesa® 4657	290	Grey	None	970	Rubber	acrylic-coated cloth	4	180°C	Available on demand
tesa® 51206	114	Translucent	Glassine	510	pure acrylic	PE	4.3	On demand	Available on demand
tesa® 51207	114	Transparent	Glassine	510	pure acrylic	PE	4.3	On demand	Available on demand
tesa® 51217	154	Transparent	Glassine	510	pure acrylic	PE	4.3	On demand	Available on demand

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