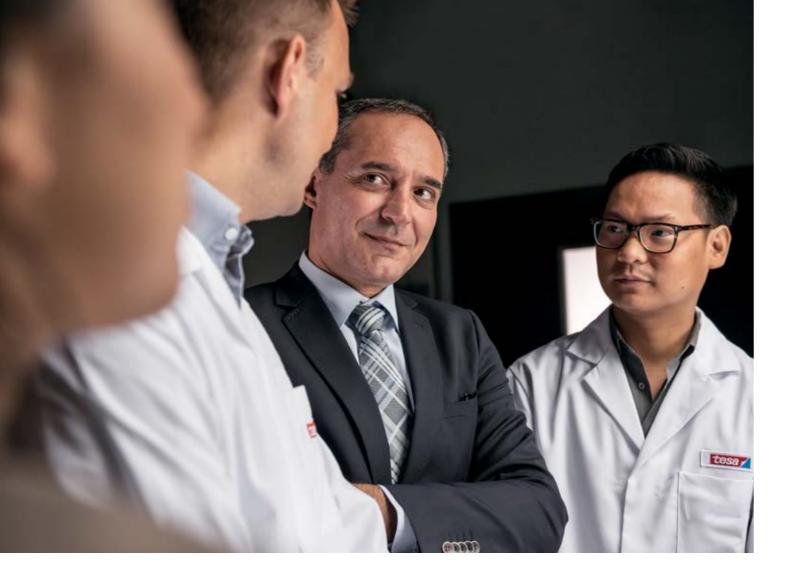


Tape Solutions for the Appliance Industry



As a global partner to the multinational appliance industry, we offer a wide range of adhesive tape solutions for all appliances – from refrigerators, ovens, dishwashers, freezers, and washing machines up to and including commercial appliances such as ice-cold merchandisers and chest freezers.

The tapes can be used for various mounting or bonding applications, venting solutions during the foaming process of cooling appliances, special marking, and identification, as well as surface protection, packaging, and transport securing. With products for the mounting of decorative glass panels (deco glass mounting) and special solutions

for state-of-the-art control panels and displays, we offer a complete appliance assortment.

Many innovative solutions do not just allow you to reduce the weight of your appliances, but they also improve the quality and strength of them. Production efficiency is also one of our main targets, which we want to offer to the appliance manufacturers. Whether you call it household appliances, major domestic appliances, or just white goods, don't leave your high product quality to chance. Go for our tapes like all of the ten largest appliance producers worldwide, and many others, do.

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FRESH SOLUTIONS

Refrigerators and freezers can be found in almost every household around the world. The requirements have gone beyond the preservation of food and beverages. State-ofthe-art design and features are expected by the customer, which makes the production even more demanding. Our tapes can improve this enormously. From efficiency to quality improvements, our wide range of tapes offers efficient solutions.



Adhering coils

tesa® aluminum foil tapes

Adhering tubes as close and tight as possible to the poly-styrene (PS) body to enable the highest rate of temperature transfer works even better with an aluminum foil tape.

Characteristics

- High bonding strength on metal and PS
- Easy unwinding
- Flexible backing
- · With/without liner



Evaporator mounting

tesa® non-woven tapes

Bonds the evaporator plate directly to the back of the PS body, with full area (100%) to avoid PU foam migration after injection..

Characteristics

- High tack
- Sufficient adhesion on metal and polystyrene
- · Easy lift of liner, even with larger dimensions



Decorative/plastic trims

tesa® filmic tapes

Trims equipped with double-sided tapes are a comfortable solution for mounting them individually at the end customer's side. In particular, trims for covering the gap on built-in appliances are in focus here.

Characteristics

- Available in spools
- High adhesion to plastic
- Aging resistance



Mounting of emblems

tesa® filmic tapes

With double-sided tapes, emblem mounting can be done without punching the metal or plastic substrates..

Characteristics

- High adhesion to various materials
- Aging, temperature, moisture, and shock resistance



Mounting of displays

tesa® foam and filmic tapes

Applying displays already equipped with a double-sided tape is efficient and clean.

Characteristics

- · High adhesion toplastics and metals
- Good die-cuttability
- Flexible backing
- Temperature resistance

Fixing of small parts

tesa® filmic tapes

Many small parts made of plastic or metal have to be mounted to the PS body. If equipped with a double-sided tape, handling and positioning becomes easier.

Characteristics

- Good adhesion to PS
- Conformable backing to stick to irregular surfaces
- Available as die-cuts

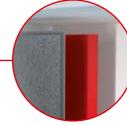
Vacuum insulation panel mounting

tesa® non-woven tapes

It is necessary to mount the vacuum insulation panel (VIP) with a double-sided tape to keep the panel in place during the foaming process.

Characteristics

- High tack
- Sufficient adhesion value
- · Easy lift of liner



Deco glass mounting

tesa® ACXPlus and foam tapes

With a double-sided tape, deco glass panels could be mounted with no screws, no curing time, and no risk of dripping compared to glue systems.

Characteristics

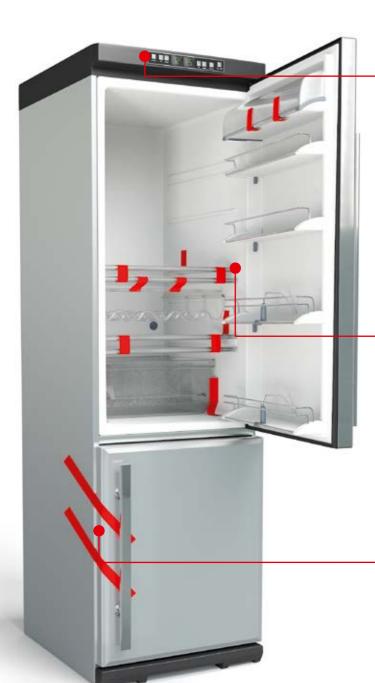
- · High adhesion on glass, aluminum, and steel
- Dampening properties
- Available in various colors



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SOLUTIONS FOR TRANSPORT SECURING

After all the efforts have been undertaken to produce the best refrigerator or freezer, the safe transport should not be left to chance. Our surface protection and strapping tapes are more than reliable resources to secure appliances and their spare parts during transportation. From America to Europe, from Africa to Asia, there are our solutions that meet the global requirements of the appliance industry.



Surface protection

tesa® masking and surface protection tapes

Protects glass, plastic, or painted metal parts to avoid scratches, dirt, and other defects during assembly, transport, or installation process

Characteristics

- Sufficient bonding
- Residue-free removal
- · Aging resistance

Transport securing of shelves and bins

tesa® strapping tapes

Attaching with tape avoids damage to – in particular – glass shelves, bins, and other parts during transport.

Characteristics

- Special adhesive for residue-free removal
- · High tensile strength to avoid e.g. rattling
- No risk of tearing

Transport securing of doors

tesa® strapping tapes

The tape will take over some of the load so heavy impacts do not have an effect on the hinges, there by avoiding claims.

Characteristics

- Residue-free removal, even at lower temperatures
- No effects to surfaces
- · Very strong and stress resistant

Technical information

As a worldwide leading supplier of strapping tape, we offer a broad range of products with various features for transport securing. Based on monoaxially oriented polypropylene (MOPP)* film backings and various adhesive systems, our strapping tape exhibits many distinguished features.

High tensile strength and low elongation

Compared to biaxially oriented polypropylene (BOPP) and polyester (PET) films, MOPP features significantly higher tensile strength and lower elongation, which is essential for transport securing.





Residue-free removability

The special treatment of the backing and the dedicated design of the adhesive system allow the products to be cleanly removed from various surfaces without leaving any residues – even temperatures as low as -10° C.

Dispenser

Our strapping tapes can even be used more efficiently with fully automatic bench dispensers.

Fully automatic

tesa® 6068

bench dispenser



* Also known as TPP (tensilized polypropylene)

Foaming process applications

Air permeability



tesa® venting tapes

Covers holes to avoid the squeezing out of the PU foam during the foaming process, but allows air flow.

Characteristics

- · Backing ensures sufficient air flow
- Hand tearable

Gap covering before foaming



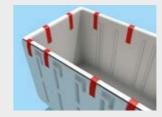
tesa® cloth tapes

Covers gaps and joints to avoid the squeezing out of the PU foam during injection.

Characteristics

- High adhesion value
- Easy unwinding
- Hand tearable

Reinforcing before foaming



tesa® cloth and strapping tapes

Holds the form tightly together during foaming.

Characteristics

- High tensile strength and shear resistance
- Residue-free removal

Hole covering



tesa® masking and cloth tapes

Covers holes to prevent the PU foam from squeezing out during foaming process.

Characteristics

• Tacky adhesive for secure sealing

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DURABLE CONCEPTS FOR MODERN KITCHENS

However a new oven, hood, or cooktop is planned, we have many solutions that will give freedom to the designers and help to improve the production efficiency. Many applications in this area could be preassembled with our tape and die-cuts, which makes the process even cleaner and more measurable. There are many different materials present in a modern kitchen appliance that can be bonded by our products.



Mounting of emblems

tesa® filmic tapes

With double-sided tapes, emblem mounting can be done without punching the metal or plastic substrates, which is ideal when preassembled.

Characteristics

- Easy to die-cut
- High adhesion to various materials
- Aging, temperature, moisture, and shock resistance



Constructive bonding on the inside of the door

tesa® ACXplus

Fixing a metal construction with screws is an insufficient concept. By using double-sided tape, no additional screws and no curing time are necessary. Instead, the production process becomes faster and more flexible.

Characteristics

- High adhesion value to glass and aluminum
- Dampening properties

- Viscoelastic acrylic core

- Deep black for the best design

Mounting of reinforcement bars

tesa® foam tapes

Reinforcement bars are the right choice for improving the strength of stainless-steel hoods. To achieve the best results while avoiding any visible bonding, our foam tapes are the perfect solution.

Characteristics

- · High adhesion to steel
- Easy to handle
- · Able to preassemble with tape

Mounting of control panels

tesa® foam tapes and ACXplus

Larger displays and other design reasons have increased the requirements of mounting control panels to many appliances. Foam tapes, best as a die-cut, are appropriate.

Characteristics

- · High adhesion to plastics and metals
- Good die-cuttability
- Flexible backing thickness

Transport securing of cooktop

tesa® strapping tapes

Keeps the metal cooktop in place and avoids movement, so possible scratches will not occur. Tape can fix other film or board additionally.

Characteristics

- · Residue-free removal
- · No effects on surfaces
- Very strong and stressresistant backing
- · Removal even at lower temperatures





Mounting of design panels

tesa® ACXplus

Fixes decorative, branded plastic panels to the outside of a basic metal housing.

Characteristics

- · High bonding strength to keep the panel in place
- · Foam-based design for avoiding rattling and for dampening
- Temperature resistance to withstand all climate conditions



8 Cooking Appliances Cooking Appliances 9

CLEAN SOLUTIONS

Today's washing machines, dryers, and dishwashers don't just do a great job in most households around the world, but they now contain more features than ever. Here, our solutions are the right choice. From various constructive applications to securing parts of the appliances during transportation, we have many suitable products designed for laundry and cleaning appliances.



Mounting of glass doors

tesa® ACXplus

Mounting the door of a washing machine to the hinges can be done using an adhesive tape.

Characteristics

- Viscoelastic acrylic core
- High adhesion value on glass and aluminum/steel
- Dampening properties
- Deep black for the best design



Mounting of membrane switches

tesa® filmic and non-woven t apes

Applying thin membrane switches with our thin tapes on appliances is a state-of-the-art solution. Being easy to die-cut and having great adhesive performance are the main advantages.and more flexible.

Characteristics

- High adhesion to plastics
- Good die-cuttability
- Flexible backing



Fixing of small parts

tesa® filmic tapes

Many small parts made of plastic or metal have to be mounted to the PS body. If equipped with a double-sided tape, handling and positioning become easier.

Characteristics

- Good adhesion to PS
- Conformable backing to stick to irregular surfaces
- Able to stop the PU foam from migrating
- · Available as die-cuts



tesa® foam tapes

Larger displays and other design reasons have increased the requirements of mounting control panels to many appliances. Foam tapes, best as a die-cut, are appropriate.

Characteristics

- High adhesion to plastics and metals
- Good die-cuttability
- Flexible backing thickness

Mounting of decorative trims

tesa® foam tapes and tesa® ACX^{plus}

When mounting decorative plastic or metal applications on the front door, tape offers many advantages here, e.g. a clean process.

Characteristics

- High bonding strength to keep the decorative trim in place
- Foam-based design for avoiding rattling and for dampening
- Temperature resistance to withstand all climate conditions

Mounting of displays

tesa® filmic and foam tapes

Applying displays already equipped with a double-sided tape is efficient and clean.

Characteristics

- · High adhesion to plastics
- Good die-cuttability
- Flexible backing





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SOLUTIONS FOR PROFESSIONALS

Whether an appliance is designed for household or commercial use, our solutions are the right choice to meet the demanding requirements. Our products can help to improve productivity of a commercial appliance significantly as well as the overall product quality. Especially due to the heavy use of commercial appliances, trust us.



Mounting of control panels

tesa® filmic and foam tapes

Applying displays already equipped with a double-sided tape is efficient and clean.

Mounting of bumper rails

When applying plastic or metal

trims to a metal housing, no rivets and screws are needed

and there is no curing time or

risk of dripping as with liquid

Characteristics:

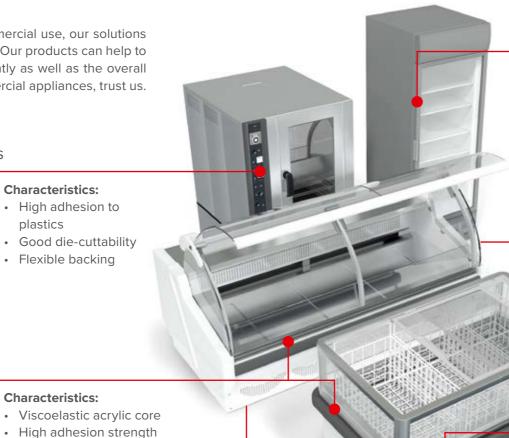
- · High adhesion to plastics
- · Good die-cuttability
- Flexible backing

Characteristics:

on glass and aluminum

· Dampening properties

· Deep black for the best



Transport securing of doors

tesa® strapping tapes

The tape will take over some of the load, so that heavy impacts do not have any effect on the door hinges, and thereby avoiding claims.

Characteristics:

- · Residue-free removal
- No effects on surfaces
- · Very strong and stressresistant backing
- · Removal even at lower temperatures



Fixing of small parts

tesa® filmic tapes

Many small parts made of plastic or metal have to be mounted to the PS body. If equipped with a double-sided tape, handling and positioning become easier.

Characteristics:

- Good adhesion to PS
- · Conformable backing to stick to irregular surfaces
- · Available as die-cuts



Mounting of emblems

tesa® filmic tapes

double-sided emblem mounting can be done without punching the metal or plastic substrates.

Characteristics:

- High adhesion to various materials
- · Aging, temperature, moisture, and shock resistance





Adhering coils

tesa® ACXplus

glue systems.

tesa® aluminum foil tapes

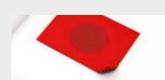
Adhering tubes as close and tight as possible to the polystyrene (PS) body to enable the highest rate of temperature transfer works even better with an aluminum foil tape.

Characteristics:

- High bonding strength on metal and PS
- Easy unwinding
- Flexible backing
- · With/without liner



Air permeability



tesa® venting tapes

Covers holes to avoid the squeezing out of the PU foam during the foaming process, but allows air flow.

Characteristics:

- Backing ensures sufficient air flow
- Hand tearable

Gap covering before foaming



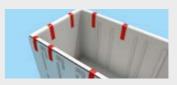
tesa® cloth tapes

Covers gaps and joints to avoid the squeezing out of the PU foam during injection.

Characteristics:

- High adhesion value
- Easy unwinding
- Hand tearable

Reinforcing before foaming



tesa® cloth and strapping tapes

Holds the form tightly together during foaming.

Characteristics:

- · High tensile strength and shear resistance
- Residue-free removal

Hole covering



tesa® masking and cloth

Covers holes to prevent the PU foam from squeezing out during foaming process.

Characteristics:

· Tacky adhesive for secure sealing

Evaporator mounting

tesa® non-woven tapes

Bonds the evaporator plate directly to the back of the PS body, with full area (100%) to avoid PU foam migration after injection.

Characteristics:

- High tack
- · Sufficient adhesion on metal and polystyrene
- · Easy lift of liner, even with larger dimension

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WORLDWIDE SUPPORT FOR YOUR VALUE CHAIN

Complementary electronics assortment

Nowadays, appliances have become smarter. Large LCD and TFT screens have found their way onto ovens, fridges, and washing machines. We offer numerous solutions for these applications that are successfully used in the smartphone and tablet industry. If there is a need for optically clear adhesives, special insulation, or bonding with very narrow thicknesses, our electronics assortment offers many state-of-the-art solutions.

By being a global player in the electronics industry, we can support you across your value chain, wherever your electronic subsuppliers are located.



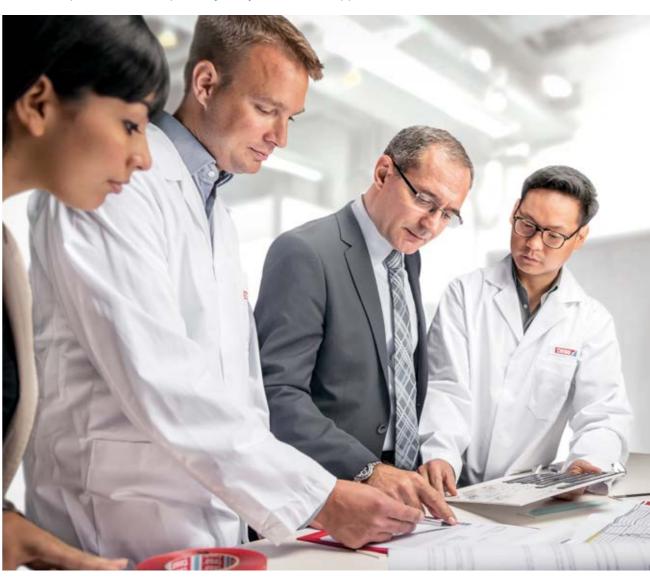
For further information about adhesive solutions for electronic devices, you can download our electronics assortment folder here:

www.tesa.com/industry/electronics or via this QR code.



Application solution engineering

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



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.

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Our management system is certified according to the standards ISO 9001, ISO/TS 16949, and ISO 14001.

tesa SE

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