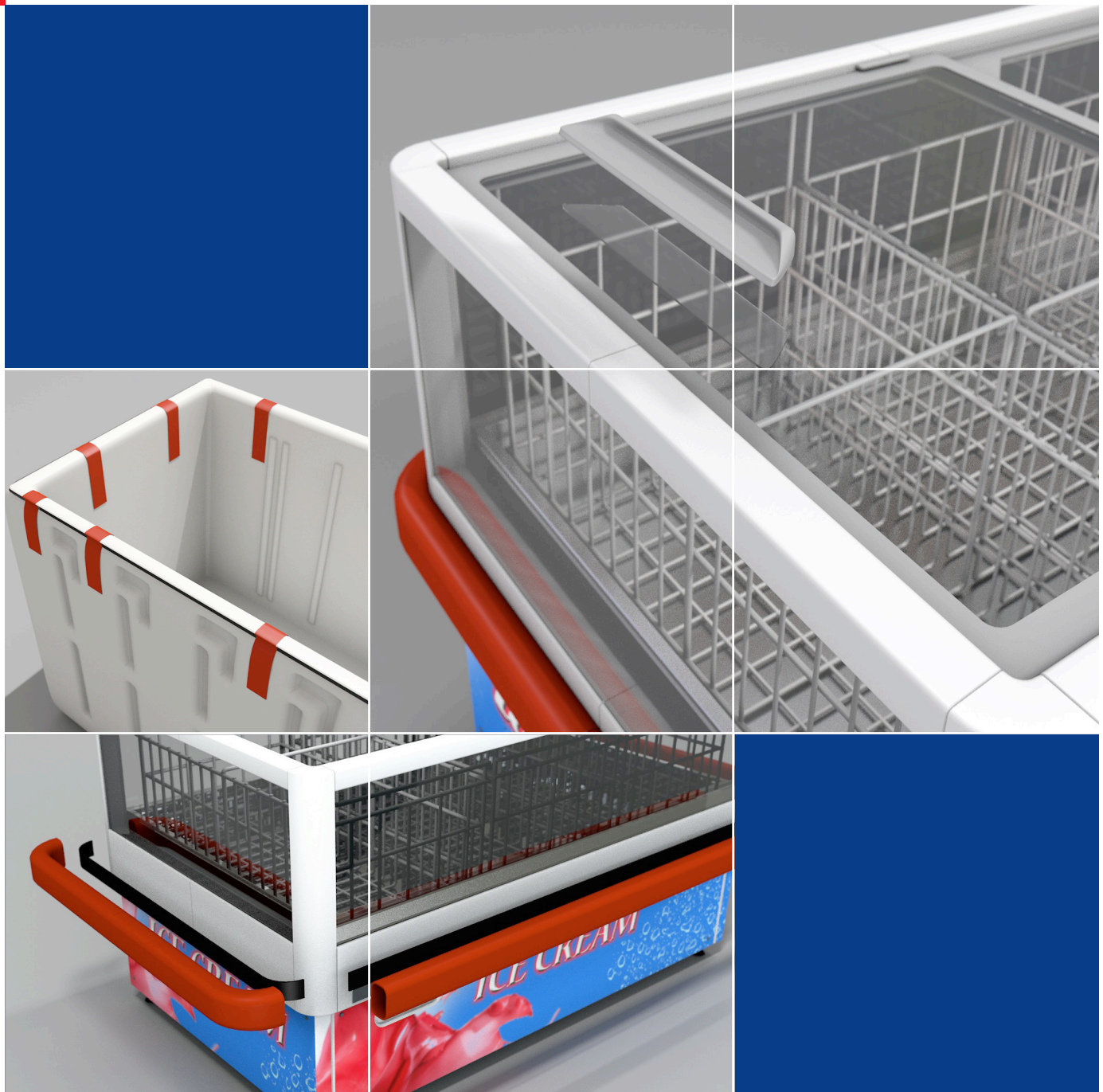


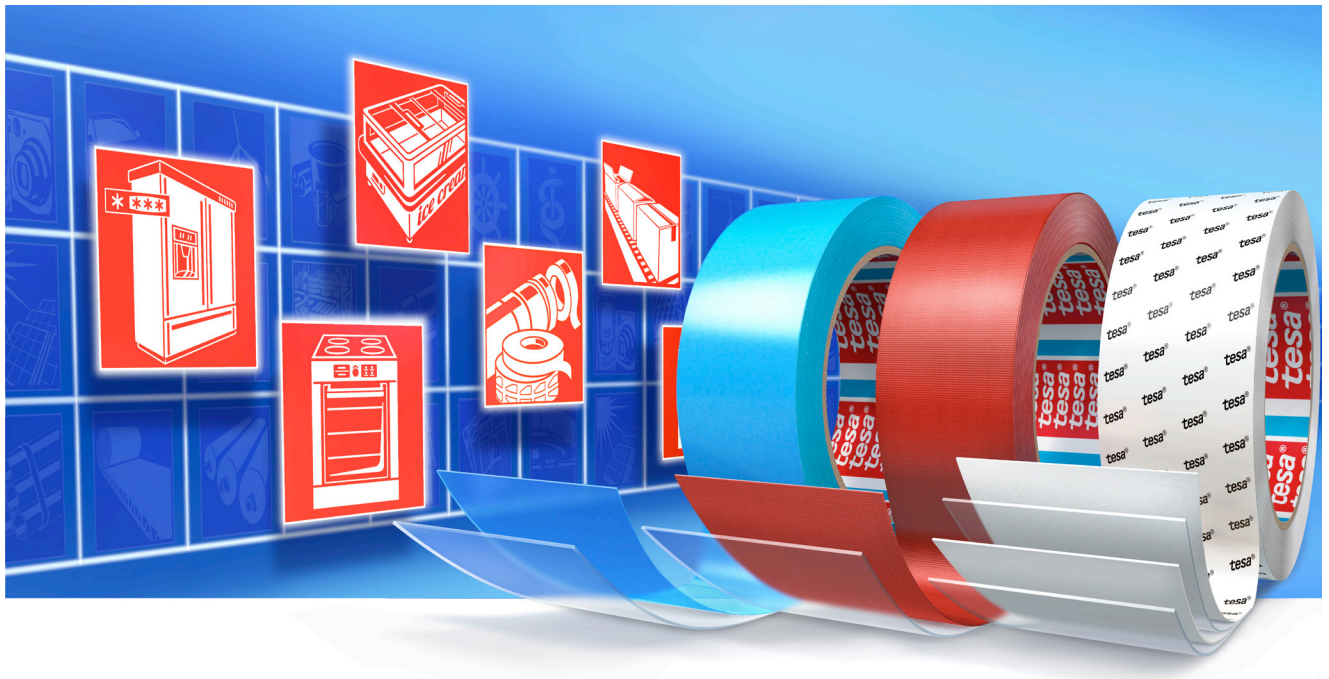
Major Commercial Appliance

tesa® Solutions for Commercial Appliance Industries

APPLICATION FOLDER



Making Product Processes More Efficient – tesa® Tape Solutions



tesa SE is one of the leading manufacturers of PSA adhesive tapes and system solutions. Our tape experts located in over 50 countries supporting customers to find a perfect solution. International companies in automotive, appliance and electronic industries work with tesa SE as partner on all continents.

For more than 100 years tesa SE designs and produces PSA adhesive tapes. The current range of over 700 different qualities offers solutions for all kinds of applications such as packaging, masking, protection and every kind of bonding. In most cases the ideas for new tape qualities are created together with our partners in the industries.

Adhesive tape designs that make production processes more efficient and improve the quality of the finished goods are the base for tesa's success. An example from the early 80ties is the blue TPP tape for transport securing of shelves, bins and cables in- and outside of appliances – which still has its place in nearly every device.

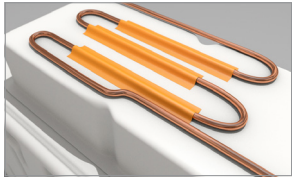
Today tesa designs new tape qualities for various customer needs in R&D centers and production sites located in Europe, America and Asia. The combination of contact on local but overview and knowledge on international level results in state of the art adhesive tape solution for the industry.

Advantages for tesa customers:

- Knowledge of customer's processes
- Complete assortment for all tape applications
- New adhesives and innovative technologies
- Customized systems for tape application
- Own affiliates in over 50 countries
- tesa tape and process experts close to all major production centers



1. Adhering coils



Adhering the tubes as close and tight as possible

to the PS-body to enable the highest rate of temperature transfer, even better with an aluminum foil based tape.

Characteristics:

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

tesa® speciality tapes, best tesa® 50565

2. Evaporator mounting



Bonding of the evaporator plate directly to the

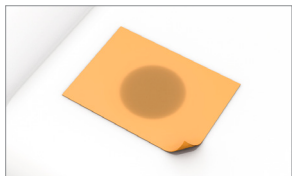
back of the PS-body, with full area (100%) to avoid PU-foam migration after injection.

Characteristics:

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

tesa® double sided tapes, best tesa® 68645

3. Venting Tape



A venting tape covers holes to avoid the

squeezing out of the PU-foam during the foaming process, but to allow air flow and thereby avoid excess pressure.

Characteristics:

- Backing to ensure sufficient air flow
- Hand tearable
- Die-cuts available

tesa® speciality tapes, best tesa® 4576

4. VIP Panel Mounting



Necessary to mount the VIP Panel to the

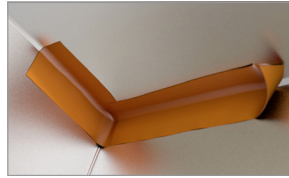
housing with a double sided tape to avoid that PU foam gets in between the bonding.

Characteristics:

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

tesa® double sided tapes, best tesa® 68645

5. Gap Covering before Foaming



Covering all gaps and joints to avoid the squee-

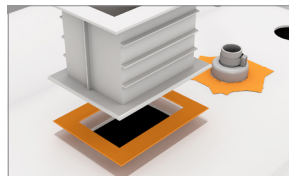
zing out of the PU-foam during injection. In small corners cloth based tapes conform best into them.

Characteristics:

- High adhesion value
- Backing allows bonding to PU foam
- Easy unwinding

tesa® speciality tapes, best tesa® 4671

6. Fixing of small Parts



Many small parts made of plastic or metal have to

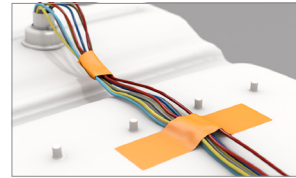
be mounted to the PS-body. If already equipped with a double sided tape, the handling and positioning becomes easier.

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® double sided tapes, best tesa® 62510

7. Cable Harnessing and Fixation



If cables are bundled, fixing them is easier

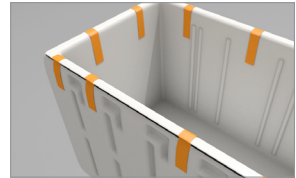
and more secure. Fixing the cables keeps them in position during PU-foam injection.

Characteristics:

- Tacky adhesive for initial contact
- Sufficient adhesion to all substrates

tesa® speciality tapes, best tesa® 4323

8. Reinforcing before Foaming



Holding the form tightly together, where two parts

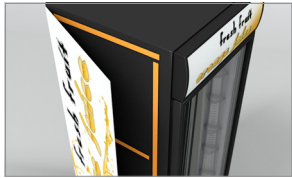
(e.g. PS-body / metal housing) are joint together, avoiding damages by PU-foam.

Characteristics:

- Very high tensile strength
- High shear resistance
- Residue free removal
- High tear resistance

tesa® strapping tapes, best tesa® 64284

9. Mounting of design panels



Fixing decorative, branded plastic panels to

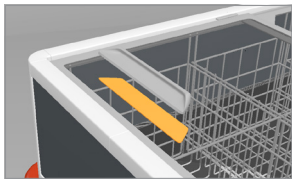
the outside of a basic metal housing.

Characteristics:

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

tesa® double sided tapes, best tesa® 7065

10. Mounting of handles / handle bars



Apply plastic parts such as handles or

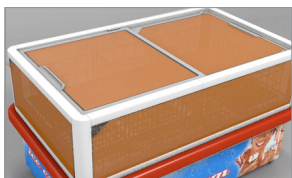
handle bars to a plastic / glass pane. No holes and screws needed.

Characteristics:

- High adhesion to ABS, glass
- High shear strength
- Excellent UV resistance
- Transparent

tesa® double sided tapes, best tesa® 7054

11. Surface protection



Protects the critical glass, plastic or painted

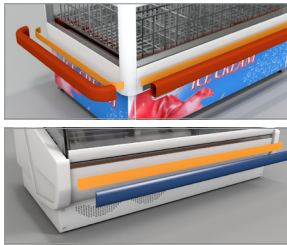
metal parts to avoid scratches, dirt or other defects during assembly, transport or installation process.

Characteristics:

- Sufficient bonding
- Residue free removal
- Aging resistance

tesa® speciality tapes, best tesa® 4848

12. Mounting of bumper rails



Apply plastic or metal trims to a metal housing. No rivets and screws needed,

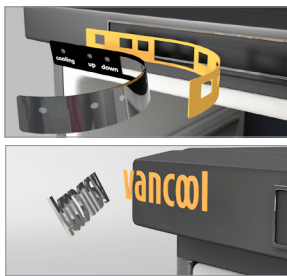
no curing time or risk of dripping as with liquid glue systems.

Characteristics:

- Visco-elastic acrylic core
- High adhesion strength on glass and alu
- Dampening properties
- Deep black for best design

tesa® double sided tapes, best tesa® 7076

13. Mounting of displays and emblems



With double sided tapes emblems or display mounting can be done without punching the metal

or plastic substrates, ideal when pre-assembled.

Characteristics:

- Easy to die-cut
- High adhesion to plastic
- Aging resistance

tesa® double sided tapes, best tesa® 68644/62508

14. Mounting of panels



The double sided tape fixes the front panel,

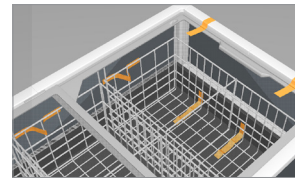
making sure no rattling and no dust is coming through, pre-assembling raises efficiency.

Characteristics:

- High adhesion to metal and plastic
- High shear strength
- Temperature resistance 70°C, longterm
- Thick product design for noise dampening

tesa® double sided tapes, best tesa® 62510

15. Transport Securing of baskets and racks



Fixation with tape avoids damages during

transport. Baskets, spare parts and other small parts are kept in place.

Characteristics:

- Special adhesive for residue free removal
- High tensile strength to stop rattling
- No risk of tearing

tesa® strapping tapes, best tesa® 64284

16. Transport securing of doors



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 to surfaces
- Very strong and stress resistant backing
- Removal even at lower temperatures

tesa® strapping tapes, best tesa® 64294

17. Transport Packaging



Packaging solutions are a very typical applicati-

on for tapes. The range for carton sealing tapes is based on backings like PP, PVC (printable).

Characteristics:

- Natural rubber adhesives sticks perfectly on card board
- Easy unwinding
- Good performance at lower temperatures

tesa® speciality tapes, best tesa® 4120 / 4124



The tesa Group – Worldwide

With offices in over 50 countries, 7 production / converting facilities, and more than 3700 employees around the world, tesa is one of the world's largest manufacturers of pressure-sensitive adhesive tape.

- Production
- Sales Office

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, expressed 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 advise you.

HEADQUARTERS

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The tesa Management System complies with the industry's most important certification standards

