

A close-up photograph shows a person's hands applying a roll of black tesa ACXplus tape to a metallic surface. The person is wearing a dark shirt. The tape is being unrolled from a roll, and a small white card with the tesa logo is being used to guide the application. The background is slightly blurred, showing a window and some interior elements.

INTELLIGENT BONDING PRODUCTS AND APPLICATIONS

tesa® ACX^{plus} – The Best Performance for Every Task

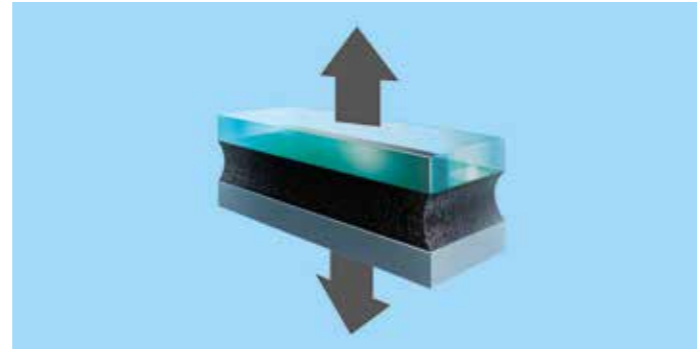
RELIABLE TECHNOLOGY

The high performance of tesa® ACX^{plus} is based on its viscoelastic properties. This special characteristic enables tesa® ACX^{plus} products to simultaneously act as a liquid and a solid: this provides increased inner strength and enables relaxation of mechanical stresses.

This special acrylic system results in the following key features:

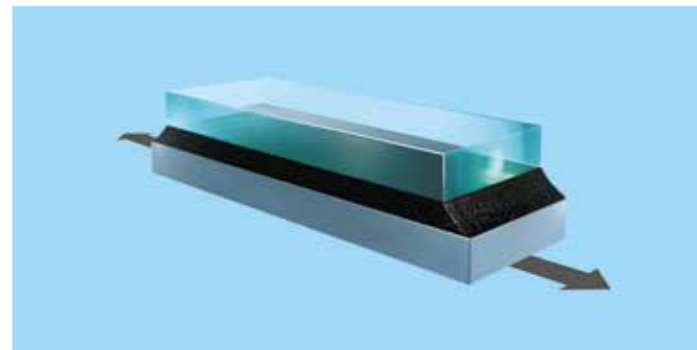
Bonding power

- For powerful long-lasting bonds – even on materials with different surface characteristics
- Wetting and chemical adaption to the bonded surfaces
- Tape thicknesses can be adjusted to compensate for rough and uneven surfaces



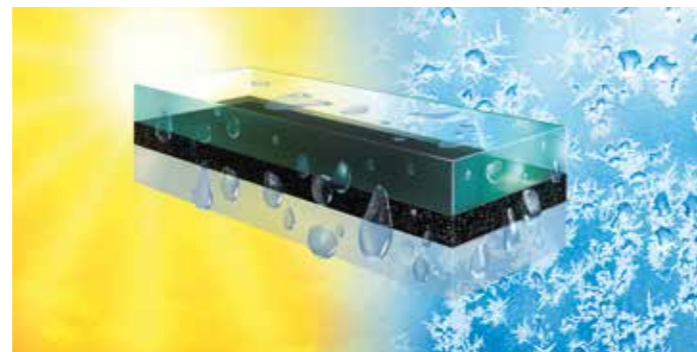
Stress dissipation

- tesa® ACX^{plus} has an outstanding ability to compensate static, dynamic and temperature stress, up to the life cycle of a component
- Due to the viscoelastic behavior stresses can be dissipated to ensure a secure bond
- Very high outdoor temperature changes are tolerated even when joined materials have different elongation factors



Temperature and weather resistance

- The bond can resist high temperatures, weather and other influences
- High degree of rust and corrosion resistance
- Curing chemistry forms an outstanding temperature-resistance network



CONSTRUCTIVE BONDING INDOORS AND OUTDOORS

Permanent bonding is a key element in every industry and can be very challenging. For many applications high-tech materials are used which have special structures and properties that need to be maintained. Traditional mechanical fasteners like rivets, welds, screws, or liquid glue may not be suitable and can even damage these materials.

That is where our most innovative product idea comes into play: tesa® ACX^{plus}.

tesa® ACX^{plus} bonding solutions can outperform conventional fastening methods by optimizing our customers' production processes and the quality and aesthetics of their products.

Advantages of double-sided tapes vs. liquid glue and mechanical fastening

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

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

tesa® ACX^{plus} 704X GRAY/WHITE



tesa® ACX^{plus} 704x is an acrylic foam tape, available in gray or white. Due to the product's formulation, this double-sided acrylic foam tape combines high adhesion levels with the ability to absorb and dissipate high dynamic loads.

tesa® ACX^{plus} 704x is designed to bond decorative elements using invisible and seamless designs. The gray or white color options adapt very well to metal and plastic surfaces and avoid reflections on translucent and decorative elements.






Furniture



Flush design



Deco panels

| tesa® ACX ^{plus} 704x Gray/White | Product | Thickness without liner [µm] | Color | Liner Version |
|--|--------------------------------|------------------------------|---------------|---|
|  | tesa® ACX ^{plus} 7042 | 500 | Gray or white |  PV28: Silicone-free film  PV26: PE-coated paper |
| | tesa® ACX ^{plus} 7043 | 640 | | |
| | tesa® ACX ^{plus} 7044 | 1,000 | | |
| | tesa® ACX ^{plus} 7046 | 1,500 | | |
| | tesa® ACX ^{plus} 7048 | 2,000 | | |

tesa® ACX^{plus} 705X HIGH TRANSPARENCY

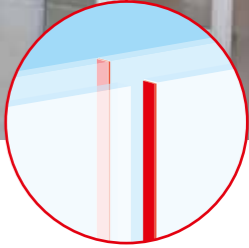


tesa® ACX^{plus} 705x series is a transparent acrylic core tape. Due to the high transparency, it is ideal for constructive bonding of transparent and translucent materials such as glass or acrylic.

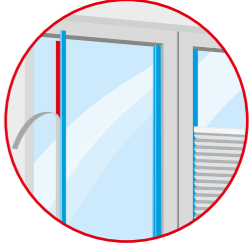
Adhesive Neutralized Edges
Based on the requirements of the application we offer a specialized feature that removes the tackiness on the outer edges of the tape.

Benefits

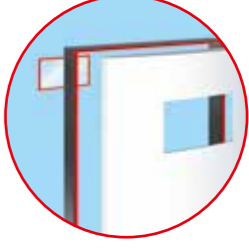
- Easy handling of tape rolls in the assembly process
- Tape edges stay free of contamination from dust or dirt
- Premium optical appearance of the mounted partition wall
- Easy cleaning after installation



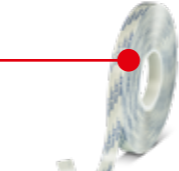


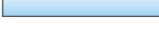
Partition walls



Plisse profiles



Signage

| tesa® ACX ^{plus} 705x High Transparency | Product | Thickness without liner [µm] | Color | Liner Version |
|---|---------------------------------|------------------------------|-------------|--|
|  | tesa® ACX ^{plus} 7054 | 500 | Transparent |  PV32: PE-coated paper  PV28: Silicone-free film  PV12: Transparent PET |
| | tesa® ACX ^{plus} 7055 | 1,000 | | |
| | tesa® ACX ^{plus} 7056 | 1,500 | | |
| | tesa® ACX ^{plus} 7058 | 2,000 | | |
| | tesa® ACX ^{plus} 75530 | 3,000 | | |

tesa® ACX^{plus} 706X HIGH ADHESION

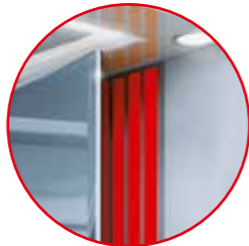


tesa® ACX^{plus} 706x series is a deep black acrylic foam tape. It combines high adhesion levels with exceptional resistance against plasticizer migration.

tesa® ACX^{plus} 706x is designed to join “hard-to-bond-materials” such as powder coatings or plastic. Even for combinations of materials with various metals, or metal/metal-bonding, it offers a convenient solution due to its innovative product design and high process safety.



Decorative parts



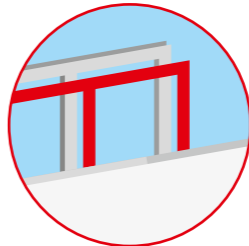
Mirror mounting



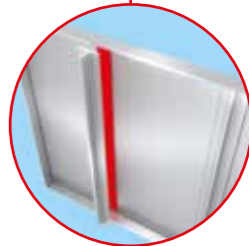
Reinforcement bars



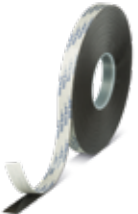


Door panels



Decorative panels



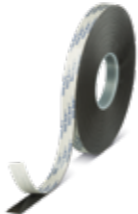


Stiffener bars

| tesa® ACX ^{plus} 706x High Adhesion | Product | Thickness without liner [µm] | Color | Liner Version |
|---|---------------------------------|------------------------------|------------|---|
|  | tesa® ACX ^{plus} 7062 | 500 | Deep black |  PV22: PE-coated paper |
| | tesa® ACX ^{plus} 7063 | 800 | | |
| | tesa® ACX ^{plus} 7065 | 1,200 | |  PV24: Film |
| | tesa® ACX ^{plus} 7066 | 1,500 | | |
| | tesa® ACX ^{plus} 76636 | 3,600 | | |

tesa® ACX^{plus} 707X HIGH RESISTANCE



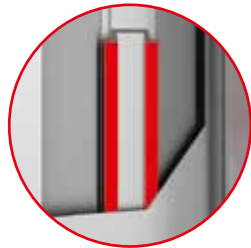
tesa® ACX^{plus} 707x series is a deep black acrylic foam tape. It combines temperature resistance with outstanding cold shock resistance down to -40°C. It is designed for demanding outdoor bonding applications and performs best when used in combination with our adhesion promoters.

| tesa® ACX ^{plus} 707x High Resistance | Product | Thickness without liner [µm] | Color | Liner Version |
|---|---------------------------------|------------------------------|------------|---|
|  | tesa® ACX ^{plus} 7072 | 500 | Deep black |  PV22: PE-coated paper |
| | tesa® ACX ^{plus} 7074 | 1,000 | | |
| | tesa® ACX ^{plus} 7076 | 1,500 | |  PV24: Film |
| | tesa® ACX ^{plus} 7078 | 2,000 | | |
| | tesa® ACX ^{plus} 70725 | 2,400 | | |
| | tesa® ACX ^{plus} 70730 | 2,900 | | |
| | tesa® ACX ^{plus} 70740 | 3,900 | | |
| | tesa® ACX ^{plus} 70758 | 5,800 | | |

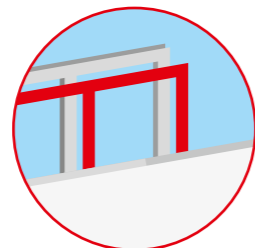
tesa® ACX^{plus} 709X LSE PERFORMER



The new tesa® ACX^{plus} 709x series features an innovative functional adhesive layer that makes strong bonds to low surface energy substrates possible, even without the pretreatment of an adhesion promoter. Furthermore, this series series allows for tape to be processed in unheated production environments with temperatures down to 0°C. Due to the product's unique formulation, it combines very high adhesion levels with the ability to absorb and dissipate high dynamic loads.



Reinforcement bars



Decorative panels

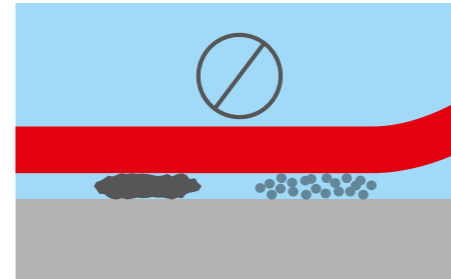


Bumper rails

| tesa® ACX ^{plus} 709x LSE Performer | Product | Thickness without liner [µm] | Color | Liner Version |
|---|--------------------------------|---------------------------------|---------------|---------------------------------|
| | tesa® ACX ^{plus} 7092 | 500 | Deep black | PV22: PE-coated paper |
| | tesa® ACX ^{plus} 7094 | 1,000 | | PV24: Film |
| | tesa® ACX ^{plus} 7096 | 1,500 | | PV12: Transparent PET |
| | tesa® ACX ^{plus} 7098 | 2,000 | | |

INSTRUCTIONS FOR USE

Surface cleaning



Remove contaminants

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



Cleaning with solvents/water

Prepare the surface by using a clean, lint free cloth and appropriate cleaning agents. Suitable solvents include:

- tesa® 60040 Industry Cleaner
- Isopropanol
- Isopropanol and water (1:1)
- Acetone or MEK (methyl ethyl ketone)



Mechanical cleaning

Rust and other poorly sticking coatings should be removed. Using a suitable abrasive, slightly roughen the surface, keep in mind:

- The surface should remain even
- The corrosion protection layer should be unaffected

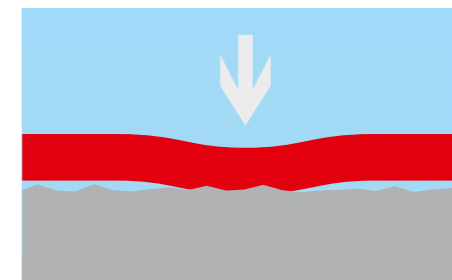
Afterwards the surface should be cleaned again using a solvent and lint free cloth.

Application



Applying the tape

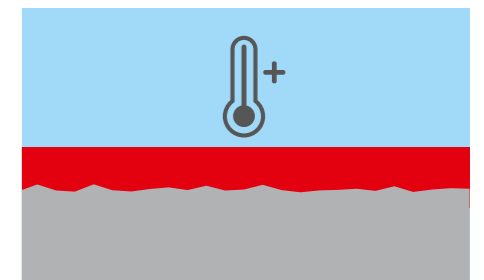
Air bubbles cause imperfections in the application and should be avoided whenever possible. Reduce the occurrence of air bubbles by positioning the tape at one end of the surface and apply pressure to secure it to the surface. Use your thumb, a pressure roller, or a squeegee to apply pressure from one end to the other.



Bonding pressure

Pressure is essential for good adhesive performance because it secures contact between the tape and bonded area.

After the final position is reached and both parts are mounted together, we recommend a uniform pressure of 1kg per 10mm over the complete area of the mounted components.






Processing temperature

At room temperature the tape meets the optimal conditions to completely bond to the surface structure. At lower temperatures (below 10°C) the adhesive becomes stiffer and optimum adhesion is difficult to reach. As a general rule, tape should be applied at temperatures between 10°C and 40°C.

Transportation & Storage

During transportation and storage ensure the tape does not come in contact with dust, dirt, or other contamination. Adhesive tapes should be stored at temperatures between 15°C and 35°C and avoid high humidity. Especially for tesa® ACX^{plus}, all slit edges should be covered with suitable separators made of siliconized film. If several rolls are stacked two sheets per roll should be used.

TECHNICAL OVERVIEW

| | Product number | Thickness without liner [µm] | Color | Adhesive Characteristics | Tape Design |
|---|---------------------------------|------------------------------|---------------|---|---|
| tesa® ACX ^{plus} 704x Gray/White | tesa® ACX ^{plus} 7042 | 500 | Gray or white | Foamed pure acrylic |  |
| | tesa® ACX ^{plus} 7043 | 640 | | | |
| | tesa® ACX ^{plus} 7044 | 1,000 | | | |
| | tesa® ACX ^{plus} 7046 | 1,500 | | | |
| | tesa® ACX ^{plus} 7048 | 2,000 | | | |
| tesa® ACX ^{plus} 705x High Transparency | tesa® ACX ^{plus} 7054 | 500 | Transparent | Solid pure acrylic |  |
| | tesa® ACX ^{plus} 7055 | 1,000 | | | |
| | tesa® ACX ^{plus} 7056 | 1,500 | | | |
| | tesa® ACX ^{plus} 7058 | 2,000 | | | |
| | tesa® ACX ^{plus} 75530 | 3,000 | | | |
| tesa® ACX ^{plus} 706x High Adhesion | tesa® ACX ^{plus} 7062 | 500 | Deep black | Foamed tackified acrylic |  |
| | tesa® ACX ^{plus} 7063 | 800 | | | |
| | tesa® ACX ^{plus} 7065 | 1,200 | | | |
| | tesa® ACX ^{plus} 7066 | 1,500 | | | |
| | tesa® ACX ^{plus} 76636 | 3,600 | | | |
| tesa® ACX ^{plus} 707x High Resistance | tesa® ACX ^{plus} 7072 | 500 | Deep black | Foamed pure acrylic |  |
| | tesa® ACX ^{plus} 7074 | 1,000 | | | |
| | tesa® ACX ^{plus} 7076 | 1,500 | | | |
| | tesa® ACX ^{plus} 7078 | 2,000 | | | |
| | tesa® ACX ^{plus} 70725 | 2,400 | | | |
| | tesa® ACX ^{plus} 70730 | 2,900 | | | |
| | tesa® ACX ^{plus} 70740 | 3,900 | | | |
| | tesa® ACX ^{plus} 70758 | 5,800 | | | |
| tesa® ACX ^{plus} 709x LSE Performer | tesa® ACX ^{plus} 7092 | 500 | Deep black | Foamed pure acrylic with specialty adhesive |  |
| | tesa® ACX ^{plus} 7094 | 1,000 | | | |
| | tesa® ACX ^{plus} 7096 | 1,500 | | | |
| | tesa® ACX ^{plus} 7094 | 2,000 | | | |

| Temperature Resistance | | Elongation at break [%] | Adhesion [N/cm] after 72h dwell time | | |
|------------------------|-----------|-------------------------|--------------------------------------|----------|-------|
| short term | long term | | Steel | Aluminum | Glass |
| 200°C | 120°C | 700 | 25 | 25 | 22 |
| | | 700 | 28 | 29 | 26 |
| | | 500 | 33 | 32 | 30 |
| | | 500 | 42 | 46 | 40 |
| | | 500 | 36 | 40 | 43 |

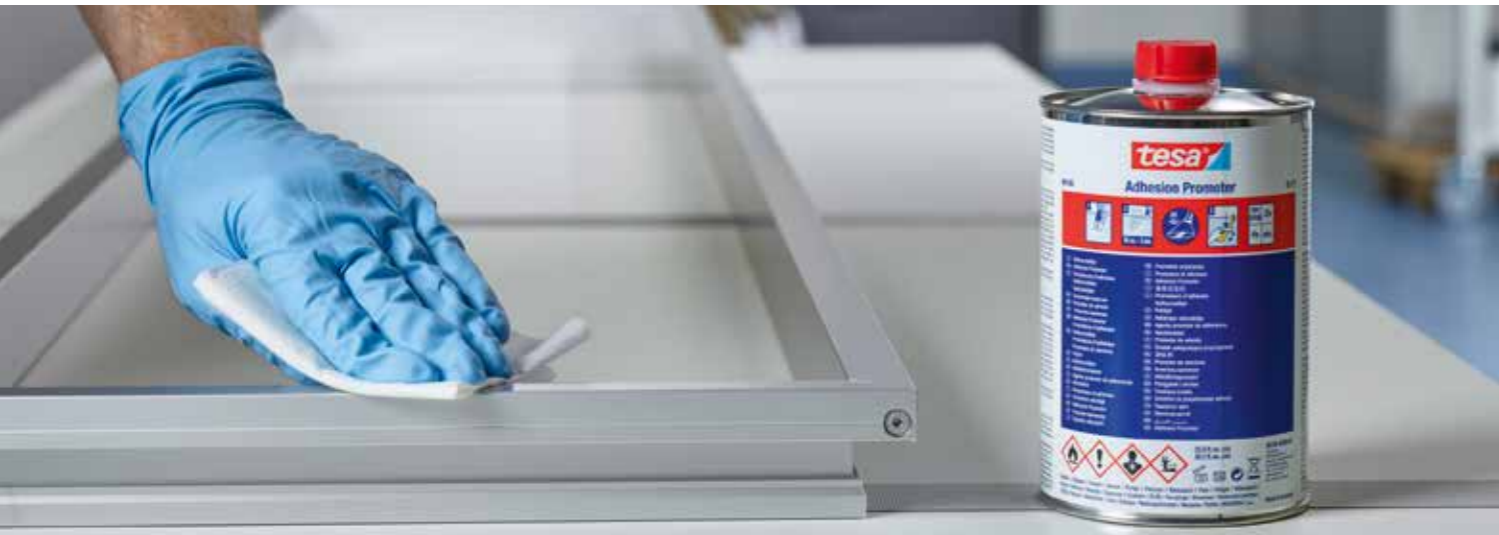
| | | | | | |
|-------|-------|-------|----|----|----|
| 200°C | 100°C | 1,000 | 18 | 18 | 20 |
| | | 1,000 | 24 | 24 | 27 |
| | | 900 | 24 | 26 | 27 |
| | | 900 | 27 | 27 | 32 |
| | | 800 | 31 | 31 | 35 |

| | | | | | |
|-------|------|-------|----|----|----|
| 170°C | 70°C | 1,000 | 24 | 27 | 27 |
| | | 1,000 | 30 | 32 | 32 |
| | | 1,000 | 40 | 35 | 36 |
| | | 900 | 40 | 40 | 39 |
| | | 800 | 56 | 60 | 70 |

| | | | | | |
|-------|-------|-----|----|----|----|
| 220°C | 120°C | 700 | 20 | 18 | 20 |
| | | 700 | 30 | 25 | 32 |
| | | 700 | 35 | 28 | 36 |
| | | 700 | 40 | 32 | 40 |
| | | 600 | 31 | 30 | 28 |
| | | 600 | 44 | 38 | 39 |
| | | 500 | 40 | 40 | 39 |
| | | 500 | 50 | 60 | 65 |

| | | | | | |
|-------|------|-------|----|----|----|
| 100°C | 80°C | 2,000 | 30 | 30 | 30 |
| | | 1,500 | 40 | 35 | 40 |
| | | 1,100 | 40 | 40 | 50 |
| | | 900 | 40 | 40 | 60 |

ADHESION PROMOTER



tesa® Adhesion Promoter – Surface pre-treatment for optimal bonding performance

tesa® 60150 Adhesion Promoter Universal

Our universal adhesion promoter is recommended for a broad variety of substrates including zinc, steel, and PP/EPDM. Its UV-traceability allows easy quality control during the application process.



tesa® 60151 Adhesion Promoter Glass

This highly transparent adhesion promoter was specifically developed to ensure permanent bonding and moisture resistance on glass substrates.



tesa® 60152 Adhesion Promoter PU/HPVC

This adhesion promoter can be used to improve the adhesion on specific substrates such as PU (polyurethane) and HPVC (hard polyvinyl chloride/PVC-U/rigid PVC). Its UV-traceability allows easy quality control during the application process.



tesa® 60153 Adhesion Promoter Fast Cure

Our fast-curing adhesion promoter can be used on various surfaces, PP/EPDM (polypropylene/rubber blend). Its UV-traceability allows easy quality control during the application process.



tesa® 50690 Promoter Pen

Using the recommended promoter pen is an easy and fast solution. Its 15mm-wide felt-tip allows a clean and precise application of our adhesion promoters (not recommended for tesa® 60151 Adhesion Promoter Glass).



tesa® 60040 Industry Cleaner

tesa® Industry Cleaner 60040 is a versatile spray for fast and easy cleaning of machine and plastic parts, glass and metal surfaces. Cleaned surfaces allow for optimum bonding with tesa® adhesive tapes and spray glues.



DISPENSING TOOLS



Dispenser and Application Tools for our tesa® ACX^{plus} Assortment

tesa® 6085 Easy Taper

The adjustable tape guide and side driver of our easy taper makes straight and curved lines possible. The maximum roll diameter is 300 mm and the maximum tape width is 25 mm.



tesa® 6003 Special Taper

Our special taper can be customized to the requested tape width. It allows precise positioning on a variety of parts. The maximum roll diameter is 300 mm and the maximum tape width is 50 mm.



tesa® 6025 Adjustable Teflon Edge Taper

Our adjustable Teflon Edge Taper allows quick and precise application on glass panels or partition walls while preventing air bubbles. The edge taper is manually adjustable and works on thicknesses ranging from 6 to 20 mm.



tesa® 6096 Spool Dispenser

The dispenser features an unwinding speed ranging from 0 to 26 m/min and makes efficient tape processing possible.



tesa® 6027 Pressure Roller

Our pressure roller helps apply a balanced amount of pressure throughout the tape, which leads to an increase on adhesion performance. The manual application helps minimize air bubbles.



tesa® 6003 Manual Pressure Device

The use of this manual pressure device helps to minimize air bubbles and leads to a uniform amount of pressure, which is required to ensure an optimal wetting result. The maximum tape width is 50 mm.



REFERENCE PROJECTS



Duda Propaganda Office, Brazil
tesa® ACX^{plus} 7058



University Hospital Vitoria, Spain
tesa® ACX^{plus} 7058



Shell Monolights Kuala Lumpur, Malaysia
tesa® ACX^{plus} 7074



one tesa Hamburg, Germany
tesa® ACX^{plus} 7074



Schneider Building Montreal, Mexico
tesa® ACX^{plus} 70200



Kube Building Darwin, Australia
tesa® ACX^{plus} 7078



Cruise Ship, Germany
tesa® ACX^{plus} 7065



Busscar, Colombia
tesa® ACX^{plus} 7078

CONFIRMED AND TESTED BY INDEPENDENT INSTITUTES

| | |
|---|---|
|  | ETAG 003, Category IV Resistance to functional damage from hard body impact load – 0.5 kg steel ball. Resistance to functional damage from soft body impact load – 50 kg bag UN-EN ISO 140-3: Certificate for sound reduction index |
|  | UL 746C |
|  | DIN EN 13501-1:2012 |
|  | Static shear test including mathematical extrapolation up to ten years |
|  | Dynamic tensile and shear measurements according to VE-08/1 ift DI-02/1-2: 2009-03 |
|  | Dynamic tensile measurement according to ETAG 002 |
|  | Static shear and static tensile load Creep measurement according to ETAG002 |
|  | LEED (EQ credit 4.1: Low-Emitting Materials: adhesive and sealants) |
|  | Full part wind load test regarding ABNT NBR 10821-3/11 |
|  | AAMA 501.6-09 Earthquake Test |
|  | STN EN ISO 6892-1 Road Sign |
|  | ASTM E 284-04, 330-02,331-00 Rain Screen Testing |
|  | AS 4040.2/3, AS 4040.3 Cyclone Testing |



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.



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