



INTELLIGENT SOLUTIONS FOR CONSTRUCTIVE BONDING

tesa® ACX^{plus} Reference Book



REFERENCE BOOK

Content

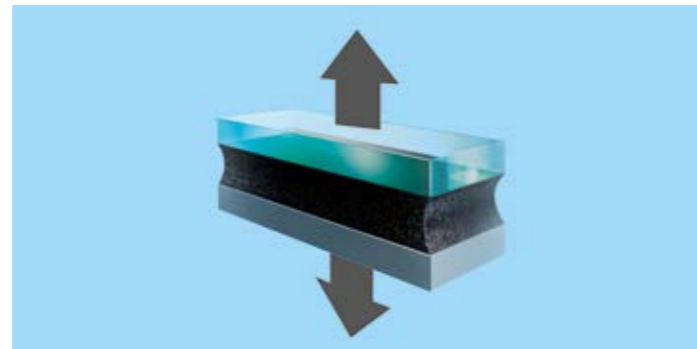
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THE BEST PERFORMANCE FOR EVERY TASK

The high performance of tesa® ACX^{plus} is based on its viscoelasticity: this leads to elastic and viscous characteristics, providing inner strength as well as relaxation of mechanical stresses. A special acrylic system results in the following main features:

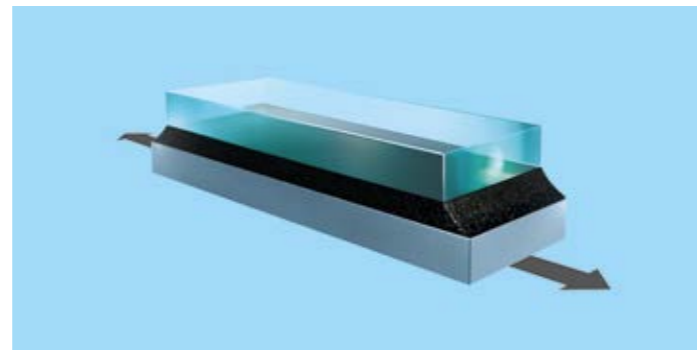
Bonding power

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



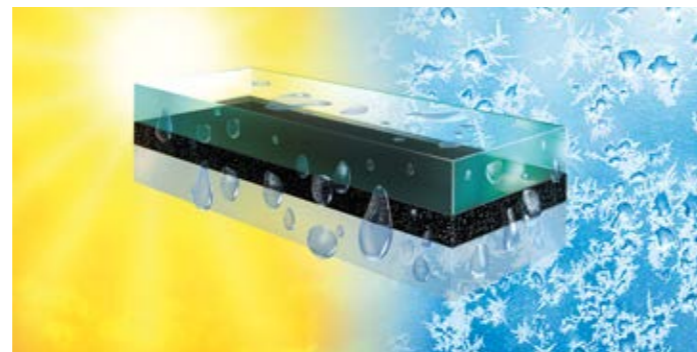
Stress dissipation

- tesa® ACX^{plus} has an outstanding ability to compensate static, dynamic and temperature stress, up to the life cycle of a component
- Due to 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

- This superior bond can resist high natural temperature, weather and other influences
- The high degree of oxidation resistance is based on the fully saturated carbon chain which is the foundation of the acrylates used in tesa® ACX^{plus}
- The special curing chemistry forms an outstanding temperature-resistance network



The world of constructive bonding applications

Constructive 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. Dissimilar materials need to be bonded. Traditional mechanical fasteners like rivets, welds, screws, or liquid glue may not be suitable or can even damage these materials.

That is where our most innovative product idea comes into the 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

SOLUTIONS FOR TRANSPARENT PARTITION WALLS



Galderma Office, Brazil
tesa® ACX^{plus} 7058

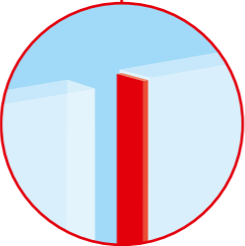


Duda Propaganda Office, Brazil
tesa® ACX^{plus} 7058

Glass-to-glass bonding

Transparent joining of glass elements or glass on alu

- High initial tack on glass
- Easy adjustment of tolerances
- Clean and fast application



GL Events HQ Lyon, France
tesa® ACX^{plus} 7058



BP Office São Paulo, Brazil
tesa® ACX^{plus} 7058



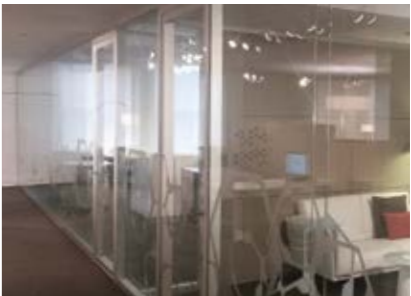
King Barcelona, Spain
tesa® ACX^{plus} 7074



Unit4 Barcelona, Spain
tesa® ACX^{plus} 7078



GlaxoSmithKline Madrid, Spain
tesa® ACX^{plus} 7058



Showroom Arquimat Chicago, USA
tesa® ACX^{plus} 7058



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



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



Certificates and external test reports

- UN-EN ISO 140-3 sound reduction index
- ift Rosenheim DI 02/1-2 2009-3 compatibility of tesa® ACXplus and PVB foil (laminated safety glass)
- ETAG 003, category IV safety in use, mechanical resistance and stability for internal partition walls

QUALITY THAT WITHSTANDS TOUGH CONDITIONS



Muntin bar mounting

Permanent bonding of multiple decorative muntin bar substrates to windows

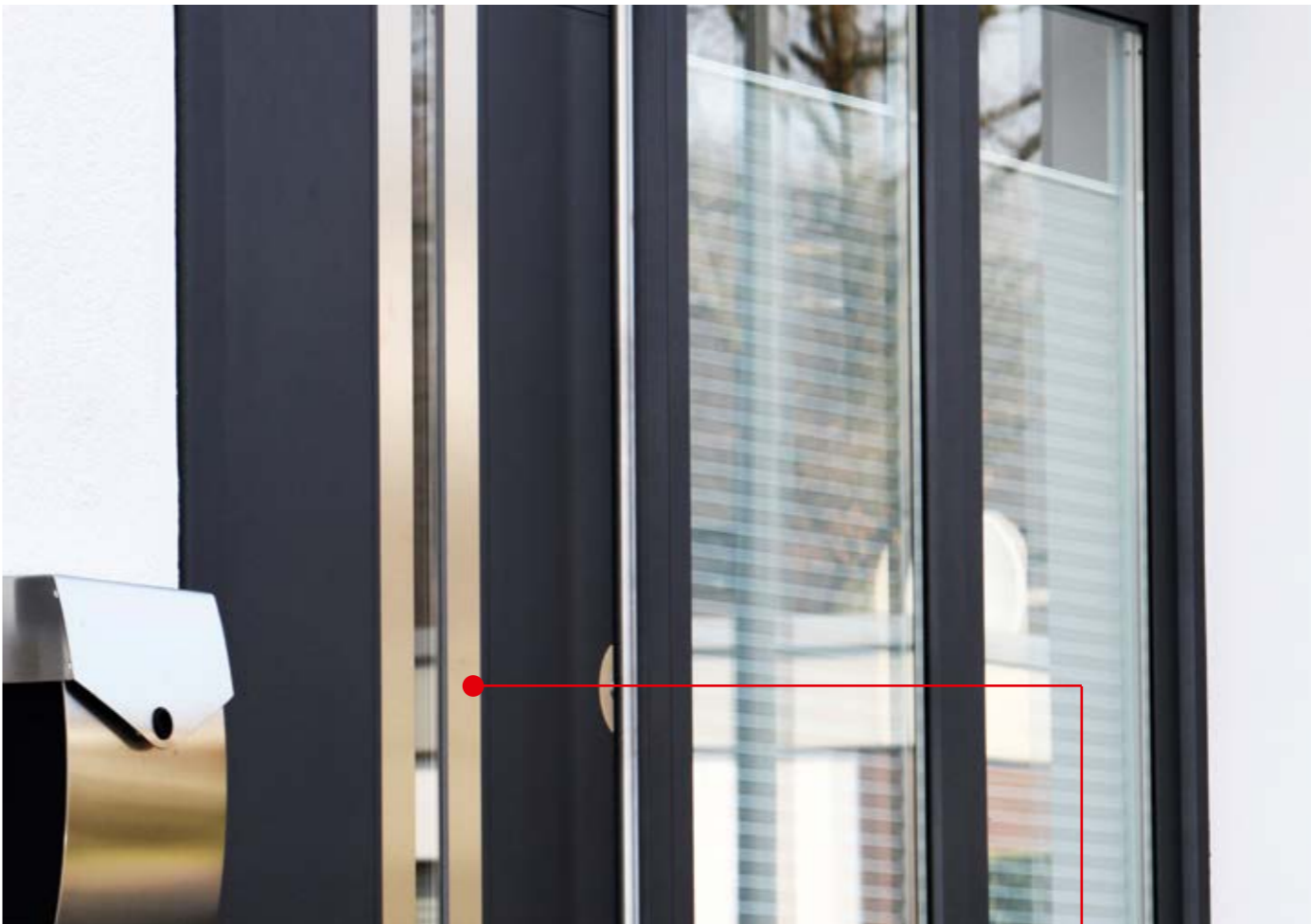
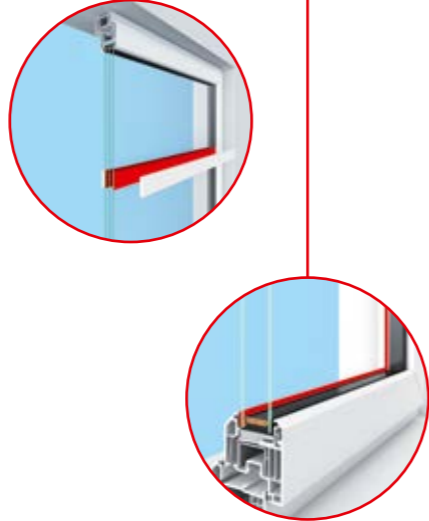
- Temperature and weather resistance
- Shock absorption
- Gap filling
- Dust and moisture seal

Dry glazing

Heavy duty fixation of window panels to PVC profiles

- Structural and permanent bonding solution
- Anti-burglar security
- Resistant to harsh outdoor conditions, optimal sealing function

tesa® ACX^{plus} is renowned in the window industry and is used by various international companies in Germany, Italy, and the Nordic countries.



Door panel mounting

Secure and durable bond of the door panel to the door leaf

- High bonding strength and excellent shear resistance for a secure bond
- Viscoelastic tape can compensate for different thermal elongation of bonded parts
- Resistance to outdoor conditions and cold-shock

tesa® ACX^{plus} has a high reputation in the door industry and is used by several well-known companies in East Europe, Asia, and Germany.



Certificates and external test reports

- Certified by the American Architectural Manufacturers Association regarding AAMA 813-11
- Conformity to ift Guideline VE-08/1

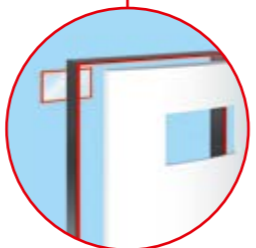
BONDING SOLUTIONS BUILT TO LAST



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

Sign manufacturing
Invisible mounting of various different materials used in the signage industry, such as the bonding of metals with plastics

- Vapor- and watertight sealing due to solid acrylic core
- Very good conformability and transparency
- No more screwing and welding



Signage, India
tesa® ACX^{plus} 7058



Hugo Boss, Germany
tesa® ACX^{plus} 7074



Mc Fit Signs, Spain
tesa® ACX^{plus} 7074



Holden Signs, Australia
tesa® ACX^{plus} 7074



RBC Royal Canadian Bank Signs
tesa® ACX^{plus} 7076



Mc Donald's Signs, Australia
tesa® ACX^{plus} 7078

Signage

NO LIMITS TO ARCHITECTURAL CONCEPTIONS



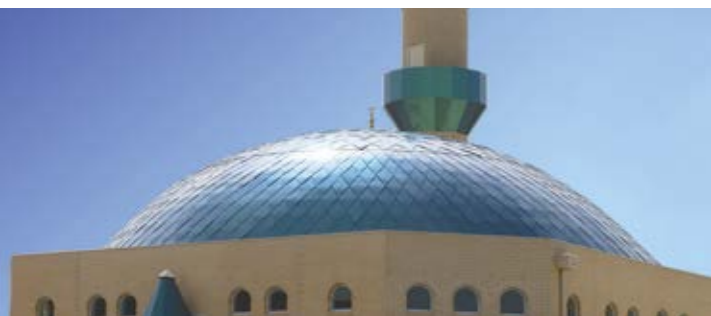
Kube Building Darwin, Australia
tesa® ACX^{plus} 70200



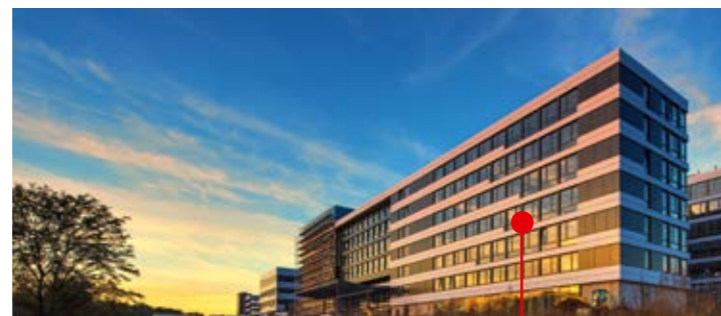
Rolands Apartment Adelaide, Australia
tesa® ACX^{plus} 70200



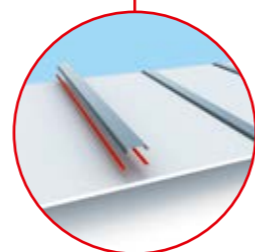
Netball Centre Perth, Australia
tesa® ACX^{plus} 70200



Mosque, Australia
tesa® ACX^{plus} 70200



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



Stiffener mounting in cassette systems

Secure and durable bond of non-load-bearing stiffeners in prefabricated cassette systems

- Resistant to harsh outdoor conditions
- Compensation of different thermal elongation of the material in use
- Aging stability



Clinica Alemana de Santiago, Chile
tesa® ACX^{plus} 70200



Industrial Complex Churolla, Australia
tesa® ACX^{plus} 70200



Gerard Lighting Fullarton, Australia
tesa® ACX^{plus} 70200



Hyundai Melbourne, Australia
tesa® ACX^{plus} 70200



Flinders Park Family Dental Adelaide, Australia
tesa® ACX^{plus} 70200



BP on the Run Dry Creek, Australia
tesa® ACX^{plus} 70200



Corporate Center Ponta Grossa, Brazil
tesa® ACX^{plus} 70200



Federal Police Building Adelaide, Australia
tesa® ACX^{plus} 70200



Mogas Heuley Petrol Station Adelaide, Australia
tesa® ACX^{plus} 70200

Direct-stick method

Concealed mounting of aluminum composite panels to metal substructures

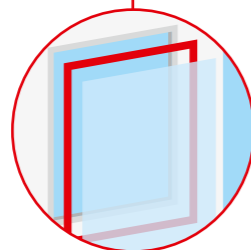
- Invisible and optimal aesthetic design
- No damage to the material in use
- Weather-resistant and suitable for outdoor use



HIGH PERFORMANCE IN DEMANDING ENVIRONMENTS



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



Mounting of glass curtain walls

Fastening of glass panels on aluminum frames supported by L-Profiles

- Certified and tested by different institutes in Chile, Brazil, and USA
- Secure bond
- Sealing and high holding power



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



Pontifical Catholic University of Chile
tesa® ACX^{plus} 70200



University Incap Chillán, Chile
tesa® ACX^{plus} 70200



University Incap Chillán, Chile
tesa® ACX^{plus} 70200



Genesis Building, Chile
tesa® ACX^{plus} 70200



Hotel Saucos del Estadio, Colombia
tesa® ACX^{plus} 70200



Certificates and external test reports

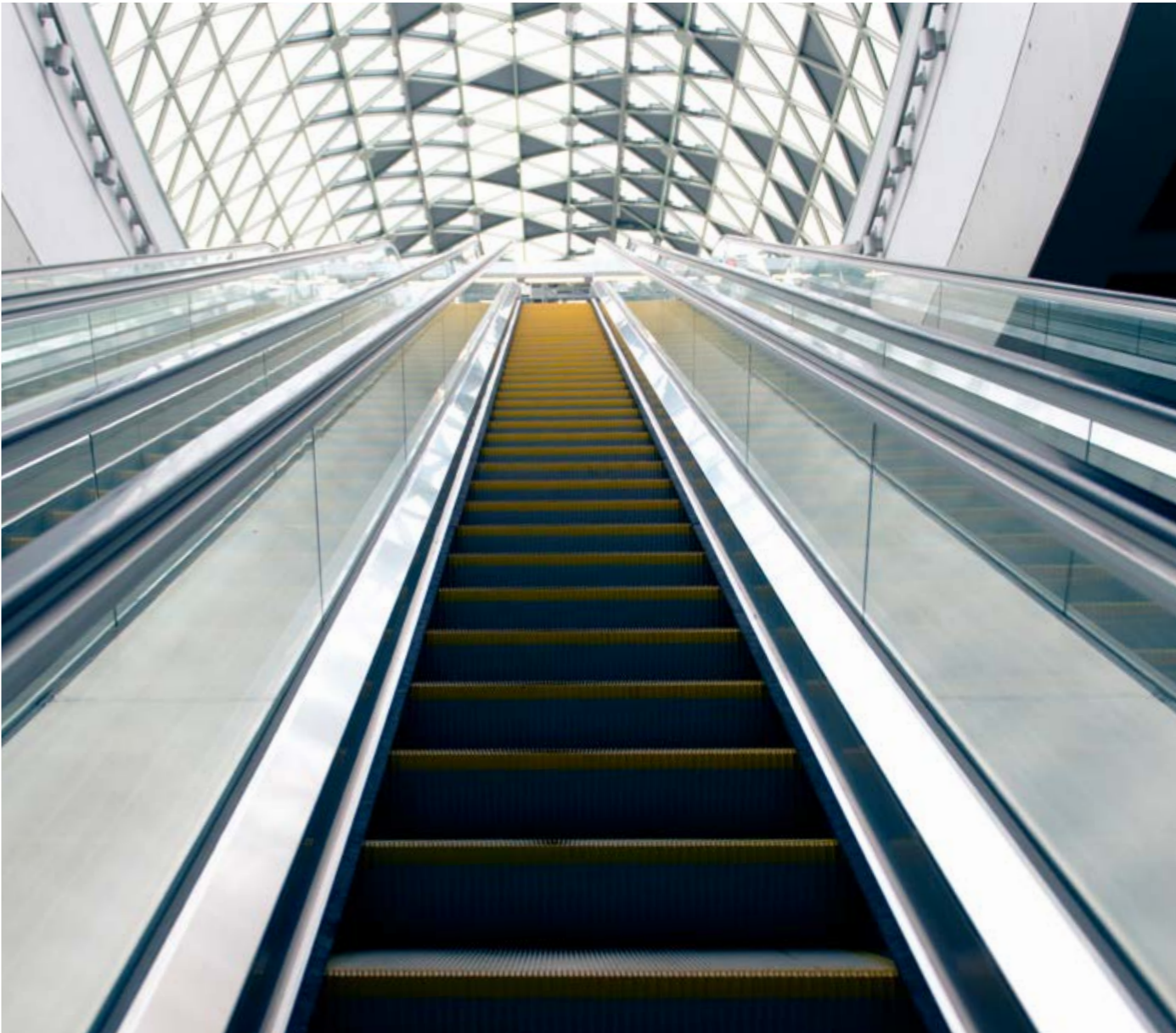
- ASTM E284-04, 330-02, 331-00 wind load and water penetration test
- AAMA 501.6-09 earthquake test on facade elements
- NBR 10821-3/11 water and air penetration of facade elements
- ETAG 002 creep measurement
- ETAG 002 dynamic tensile measurement
- DIN EN 13501-1.2012 classification of reaction to fire
- LEED

SAFETY ON A NEW LEVEL



Reinforcement bars

- Bonding of reinforcement bars to the elevator door or cabin shell panel
- Prevention of deformation caused by forces
 - High initial tack
 - Vibration and shock resistance



Elevator

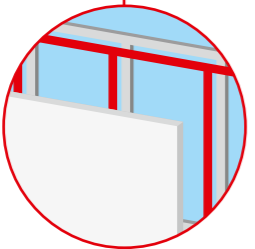
tesa® ACX^{plus} is recognized and used by the main elevator and escalator companies worldwide, as our tape ensures long-lasting holding power and reliable performance due to its visco-elastic foamed acrylic core.



FOR COMFORTABLE JOURNEYS



Busscar, Colombia
tesa® ACX^{plus} 7078



Panel mounting on vehicle body frame
 Fast and secure assembly of metal panels on the skeleton substructure

- Absorbs shocks and dampens vibration
- Clean and aesthetic exterior surface
- Eliminates holes in body panels – minimizes the potential for corrosion



Horse Trailer, USA
tesa® ACX^{plus} 7074



Interior Panel Mounting, Germany
tesa® ACX^{plus} 7065



Trailer, Germany
tesa® ACX^{plus} 7078

Transportation & Special Vehicles

INVISIBLE BONDING FOR PERFECT DESIGN



Deco panel mounting

- Fixing transparent or translucent decorative panels to appliances, such as refrigerators
- High initial tack – even on low-energy surfaces
 - Invisible bonding
 - Long lasting and durable



Mounting of design panels

- Fixing decorative panels to the outside of appliances, such as the metal housing of an oven
- High bonding strength to keep the panel in place
 - Foamed based design dampens and avoids rattling
 - High temperature resistance to withstand all climate conditions

CONFIRMED AND TESTED BY INDEPENDENT INSTITUTES

	ETAG 003, Category IV Resistance to functional damage from hard body impact load – 0.5kg steel ball. Resistance to functional damage from soft body impact load – 50kg 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 & 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



Exclusive application testing

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 UV light, high and low temperatures, peel adhesion, shock and tension absorption, and much more. The result: adhesive tape solutions that perfectly suit any 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.



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