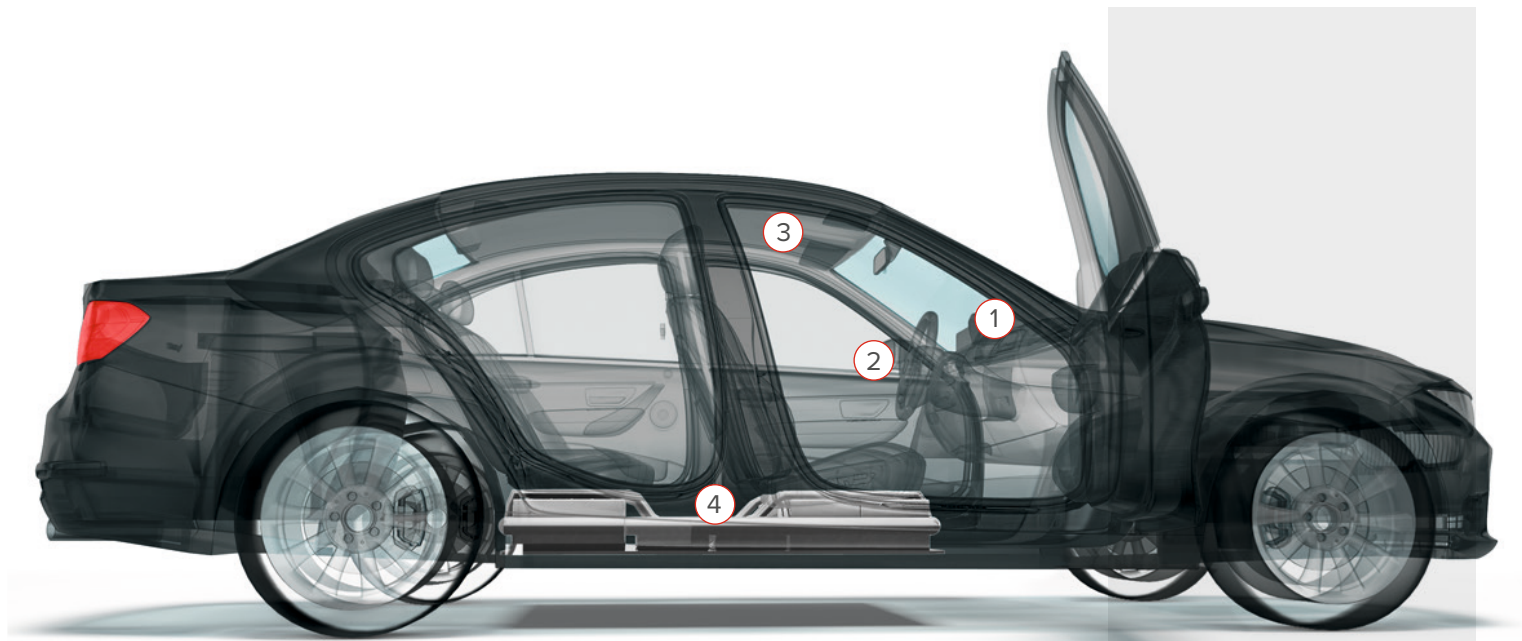




AUTOMOTIVE ELECTRONICS

Supporting the Automotive Future

EXPERIENCED PARTNER IN ADHESIVE TECHNOLOGIES



Global Support for Future Cars

1. Comfort and infotainment
2. Components for ADAS
3. Interior and exterior lighting
4. Batteries for e-mobility

As a leading global company for adhesive solutions, we combine our long-term experience in the automotive business with our broad know-how in electronics applications. We are a reliable partner for innovative adhesive solutions in automotive digitalization and environmentally friendly electrification.

Our tapes are specially made to fulfill demanding automotive requirements and serve an increasing number of important functions in addition to various mounting applications. As a certified company, we follow the TS 16949 and ISO 9001/14001 standards.

Our qualified experience comes with a deep understanding of applications, product values, and service. We run dedicated Application Solution Centers, in which we conduct critical tests for our tape solutions in your defined application. With our state-of-the-art equipment, we assure you that we follow all requested test methods to find the best possible solution.

Our worldwide presence, with sales offices and research and development facilities, ensures that we are close to our customers, to provide individual support and implement projects successfully.

Features and Benefits of Our Solutions

Adhesives

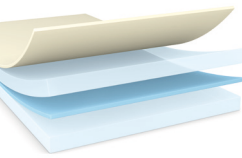
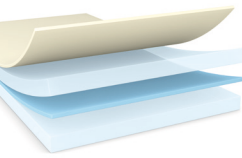
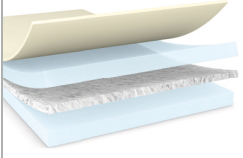
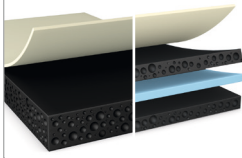
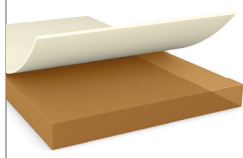
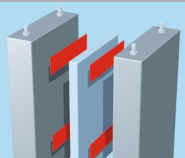
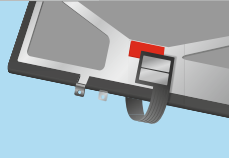
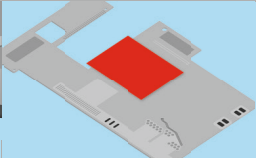
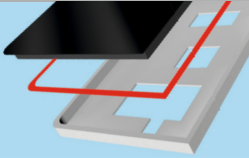
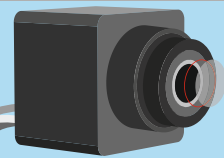
| | | |
|-------------------|--|---|
| Tackified acrylic | <ul style="list-style-type: none"> Well-balanced adhesive systems for mounting and lamination with excellent aging resistance | <ul style="list-style-type: none"> Special adhesives for advanced mounting applications Low-VOC adhesives |
| Pure acrylic | <ul style="list-style-type: none"> Excellent temperature and shear resistance Excellent UV resistance | <ul style="list-style-type: none"> Low corrosive ion content Optically clear lamination tapes (optical bonding) |
| Heat activated | <ul style="list-style-type: none"> Superior chemical and aging resistance | <ul style="list-style-type: none"> Reactive adhesive for structural bonding applications |
| Special | <ul style="list-style-type: none"> Highly shock-resistant adhesives Water vapor barrier adhesive | <ul style="list-style-type: none"> LSE adhesive Electrically conductive adhesive Thermally conductive adhesive |

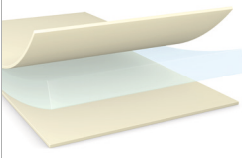
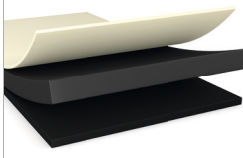
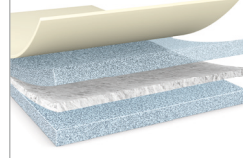
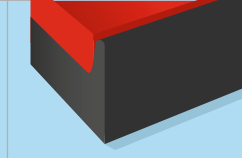
Backings/Carriers

| | | | |
|-----------------|--|---|--|
| Acrylic foam | | <ul style="list-style-type: none"> Black color PET reinforcement optional for improved handling | <ul style="list-style-type: none"> High temperature and shear resistance to absorb physical stress Precise die-cutting Excellent shock resistance |
| PE/PU foam | | <ul style="list-style-type: none"> Black color Closed cell PE and PU foams PET film reinforcement optional for improved handling | <ul style="list-style-type: none"> Excellent filling of larger gaps Very good sealing properties High shock and tension absorption |
| Filmic | | <ul style="list-style-type: none"> Transparent, white, black, and solid black color | <ul style="list-style-type: none"> Excellent dimensional stability and tear resistance Precise die-cutting Excellent electrical insulation |
| Non-woven/Scrim | | <ul style="list-style-type: none"> Translucent non-woven and scrim backings Fleece carriers | <ul style="list-style-type: none"> Highly conformable Good dimensional stability |
| Functional | | <ul style="list-style-type: none"> Electrically conductive backings Thermally conductive backings | <ul style="list-style-type: none"> Excellent electrical conductivity Reliable thermal management |

CORE ASSORTMENT





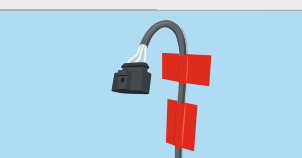
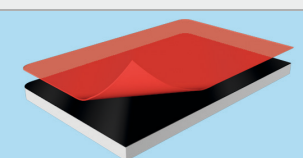
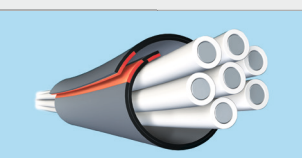
Additional Products, Thicknesses, and Colors Available: Talk to Us!

| Product group description | Mounting Tapes | | | | |
|---------------------------|--|---|---|---|--|
| | Standard filmic mounting | Advanced filmic mounting | Advanced non-filmic mounting | Superior mounting | Ultimate bonding with HAF |
| |  Proven solutions for standard mounting and lamination applications <ul style="list-style-type: none">Tackified acrylic adhesiveTransparent and black PET backingWhite PP backing¹⁾ |  Solutions for special requirements <ul style="list-style-type: none">Repulsion-resistant adhesive²⁾Differential and removable solutions³⁾618xx series: high shock resistance |  Solutions for special requirements <ul style="list-style-type: none">High-temperature-resistant products⁴⁾Low-VOC versions with scrim backing⁵⁾ |  Solutions with superior shock absorbance and dynamic stress resistance <ul style="list-style-type: none">Excellent vibration resistance in critical environmental conditionsViscoelastic core to compensate extreme physical stressPET reinforcement⁶⁾ |  Solutions for extremely strong bonds <ul style="list-style-type: none">Reactive adhesiveSuperior chemical resistance |
| Thickness cluster [µm] | 10 | ○ 68548 | | | |
| | 20 | | | | |
| | 30 | | ○ 68903 ²⁾ | | |
| | 50 | ○ 4972 ● 51972 | | ○ 68105 ⁴⁾ ○ 8853 ⁴⁾ | |
| | 60 | | | | ● 9410 |
| | 75 | | ○ 75007 ⁵⁾ | | |
| | 80 | ○ 4980 ● 51980 | ○ 68565 ³⁾ | | |
| | 90 | | | | |
| | 100 | ○ 4982 ● 51982 | ● 66910 ²⁾ ● 61865 | ○ 8854 ⁴⁾ | ● 75710 ⁶⁾ |
| | 125 | ○ 4928 ● 51928 | | | ● 9402 |
| | 130 | | ○ 75013 ⁵⁾ | | |
| | 150 | | ● 61885 | ● 75715 ⁶⁾ | |
| | 160 | ○ 4967 ● 51967 | ○ 4962 | | |
| | 175 | | | | |
| | 200 | ○ 4965 ● 51965 | ● 61895 | | ● 9401 |
| | 225 | | | | |
| | 240 | ○ 64993 ¹⁾ | | | |
| | 250 | | | ● 61054 | ● 9400 |
| | 270 | | | | |
| | 300 | | ● 61815 | ● 61055 ● 61057 | |
| | 350 | | | | |
| | 400 | | | ● 7805 | |
| | 500 | | | | |
| | 540 | | | | |
| | 600 | | | | |
| | 700 | | | ● 7808 | |
| | 800 | | | | |
| | 1,000 | | | ● 7812 | |
| | 1,200 | | | | |
| Application examples |  <ul style="list-style-type: none">General mounting and lamination |  <ul style="list-style-type: none">Bonding on curved surfacesAntenna mountingApplications with requirements on removabilityComponent mounting |  <ul style="list-style-type: none">FPC SMT mounting application before reflowConformable mounting |  <ul style="list-style-type: none">Demanding touch panel and display mounting applications with highest resistance to thermal and dynamic shockMounting with ultra-slim die-cut designMounting for waterproof designs |  <ul style="list-style-type: none">Structural bonding of parts exposed to high shockCamera lens and bezel mountingMounting of decorative metal components |

| Product group description | Functional Tapes | | | | |
|---------------------------|---|---|--|--|--|
| | Optically clear lamination | Light blocking | Electrical insulation | Gap filling and cushioning | Grounding and shielding |
| |  Solutions for optically clear lamination <ul style="list-style-type: none">Optically clear pure acrylic adhesivesExcellent suppression of delay bubbles, even in harsh environmentsSpecial versions with barrier function⁷⁾ |  Solutions for fixation, protection, and/or light blocking and mounting <ul style="list-style-type: none">Acrylic adhesives (transparent or colored)PET backing (black or matte black printed) |  Solutions for covering and insulation <ul style="list-style-type: none">s/s and d/s products with PI or PET backingExcellent electrical insulation propertiesSilicone adhesive with excellent temperature resistance⁸⁾ |  Solutions with conformable backings to compensate design tolerances <ul style="list-style-type: none">Excellent sealing propertiesSpecial differential products⁹⁾PU foam backing with good stress absorption¹⁰⁾ |  Solutions for grounding and shielding <ul style="list-style-type: none">Excellent electrical conductivity in XYZ directionVersions with excellent shielding properties availableVersatile aluminum tape for EMI shielding¹¹⁾ |
| Thickness cluster [µm] | 10 | | | | |
| | 20 | | | | |
| | 30 | | | | |
| | 50 | ○ 69402 ○ 61563 ⁷⁾ | ● 68830 ● 7250 (s/s) ● 68832 | ● 67330 (s/s) ● 67350 (s/s) ● 61124 (s/s) ⁹⁾ | ○ 60262 ● 60234 (s/s) |
| | 60 | | | | |
| | 75 | | | | ○ 60253 |
| | 80 | | | | |
| | 90 | | | | ○ 50565 (s/s) ¹¹⁾ ○ 60254 |
| | 100 | ○ 69404 | ● 7100 (s/s) | ○ 58420 (s/s) | |
| | 125 | | | | |
| | 130 | | | | |
| | 150 | | | | |
| | 160 | | | | |
| | 175 | ○ 69607 ○ 69608 | | | ● 66720 ⁹⁾ ○ 60256 |
| | 200 | | | | |
| | 225 | | | | |
| | 250 | ○ 69510 | | ● 61325 ○ 4926 | |
| | 270 | | ● 61315 | ● 66826 | |
| | 300 | | | | |
| | 350 | | | | |
| | 400 | | | | |
| | 450 | | | ● 62904 ● 66740 ⁹⁾ | |
| | 500 | | | ● 62852 ● 4976 ¹⁰⁾ ● 62906 | ○ 60215 (s/s) |
| | 540 | | | | |
| | 600 | | | | |
| | 700 | | | ● 62854 | |
| | 800 | | | | ○ 60216 (s/s) |
| | 1,000 | | | ● 62856 | |
| | 1,200 | | | | |
| Application examples |  <ul style="list-style-type: none">Lamination of two rigid substratesBonding of rigid touch panels to cover lensBonding of displays to cover lens or touch panels |  <ul style="list-style-type: none">Mounting of LCD panel and backlight unitLight blocking in displaysPCB covering |  <ul style="list-style-type: none">Battery cell insulationBattery cell fixation |  <ul style="list-style-type: none">Mounting of uneven and curved surfacesSealing applicationsMounting of LCD panels and backlight unit with removable foam |  <ul style="list-style-type: none">FPC groundingPCB groundingEMI shielding |

COMPLETE PACKAGE

Additional Products, Thicknesses, and Colors Available: Talk to Us!

| | Protection Tapes | | | |
|---------------------------|---|---|---|---|
| | Tamperproof identification | Damping and fixation | Surface protection and masking | Wire harnessing |
| Product group description |  Labels for tamperproof identification <ul style="list-style-type: none">Laser-engravable s/s multilayer backingEspecially durable adhesive: not removable without destruction of the labelCustomized microscriptingBrand protection technologies, e.g. tesa PrioSpot® |  Solutions for noise prevention and cable fixation <ul style="list-style-type: none">s/s thick PET fleece tapes with excellent damping properties¹²⁾s/s PE-UHMW backing¹³⁾Repulsion-resistant and low-VOC adhesives |  Solutions for temporary protection of high-grade surfaces <ul style="list-style-type: none">s/s flexible filmUV-resistant adhesiveHigh transparencyFor polar and nonpolar substratesTemporary masking during production¹⁴⁾ |  Solutions for bundling and protecting wire harnesses <ul style="list-style-type: none">Noise protectionRadiant heat protectionAbrasion protectionElectrical insulationMarking of high-voltage cables¹⁵⁾ |
| Thickness cluster [µm] | 25 50 75 100 110 125 150 175 200 250 260 280 500 540 600 700 800 900 | | ○ 4848 ○ 50560 ○ 50550 | |
| | ● 6930 ● 6937 | ○ 51207 ¹³⁾ | ● 4174 ¹⁴⁾ | |
| | | ● 60608PV1 ¹²⁾ | | ● 68000 PV01 ● 51026 PV6 ● 51036 ¹⁵⁾ ● 51608 |
| | | ● ○ 50118PV1 ¹²⁾ | | |
| | | ● 60606PV1 ¹²⁾ | | ● 51606 |
| Application examples |  • Tamperproof encoding |  • Mounting on curved and bent substrates • Secure cable mounting |  • Invisible and conformable surface protection on 3-D geometries • Prevention of dust and damage on sensitive surfaces |  • Cable insulation/harnessing and protection against abrasion |

● Black ● Yellow ● Orange ● Gray ○ White ○ Transparent or translucent

Customized application and on-site support



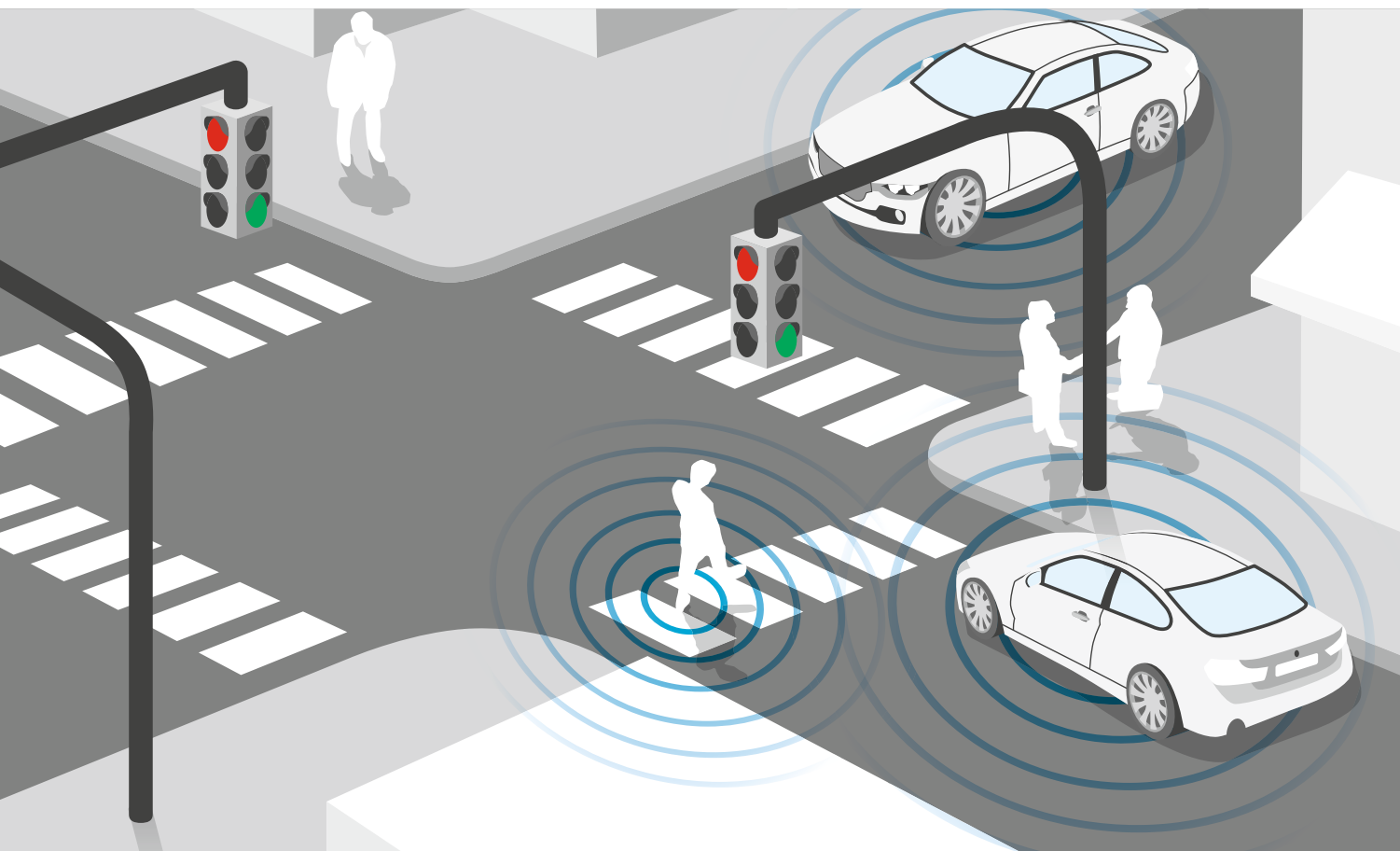
It is our business to support you and your products during the entire product development process on a daily basis. Our numerous sales offices, our research and development department, and our production facilities offer worldwide assistance. At the Application Solution Center, our technical experts evaluate your specific application needs under laboratory conditions. Our state-of-the-art equipment allows us to conduct the latest critical tests in order to help you find the best possible solution.

Efficiency through automation



We are solution-oriented and strive to make your processes even better. Die-cuts are the perfect solution when you want to automate your application process. We offer a full range of dispensers for fast and convenient application. Our dispensers offer a high level of process stability and cost savings. We customize our applicators according to your specific needs to meet production process requirements.

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. All our products delivered to automotive customers are listed in the International Material Data System (IMDS).