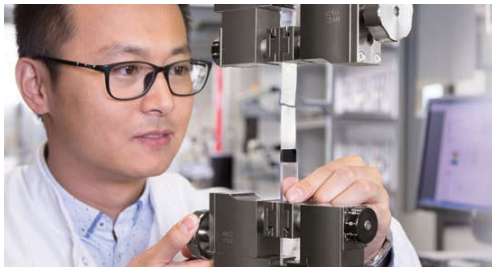
YOUR COMPLETE PARTNER

Solutions that go Beyond Tape

Every project comes with new and individual challenges. We overcome these challenges by partnering with you to create unique and specialized product solutions that meet the demands of your customers. Our competencies go beyond tape and offer a more comprehensive and technical product package.

Our offering

Because of our vast experience and our excellent adhesive technology, we are experts in adhesive tape solutions for the electronics industry. With our reliable solutions and exceptional service, we support you during the entire product development process to find the best tape solution for your requirements.



Individual support

We provide individual project support backed up by application engineers and research and development resources. Our technical experts in our Application Solution Center offer on-site support and evaluation of your individual application under laboratory conditions.

Contact us

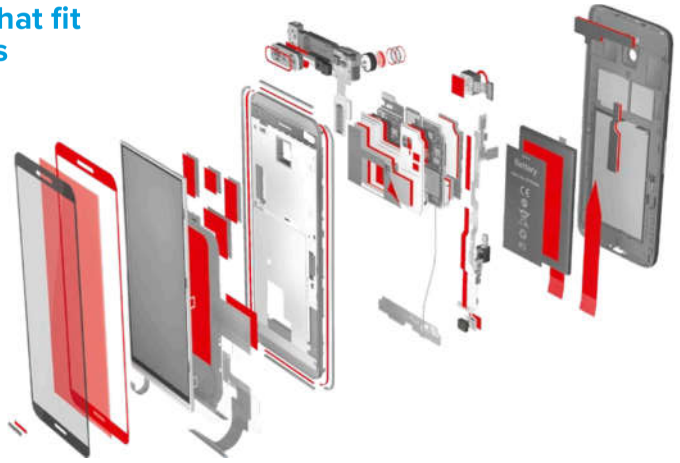
Our local experts and engineers are just a phone call away to support you with:

- Process-simulation studies
- Assistance at your manufacturing site
- State-of-the-art testing equipment
- Tests under a wide range of environmental conditions
- Customized tests with customer substrates

Contact us and benefit from a strong partnership.

TAPES FOR YOUR SUCCESS

Solutions that fit Your Needs

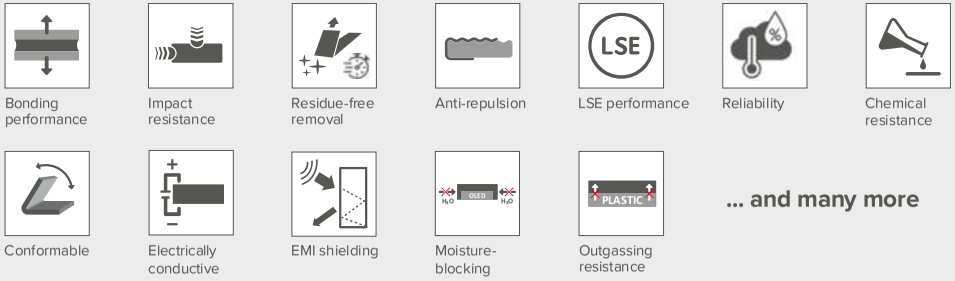


Tape solutions for smartphones

Our products have proven their quality in multiple applications and different devices over the last 20 years in the electronics industry. In this brochure we present an extract of the most important tapes from our portfolio. We divide them into the following categories: **mounting, functional, and display lamination tapes**. In the respective categories you can learn more about the different series, their characteristics, and target applications.

You will see that we often offer different solutions for similar applications, because in the end every project is individual and has specific requirements. Our ambition is always to provide you with the most suitable solution. As the listed products are only an extract of all available products, please contact your local representative if you cannot find the right solution for your individual application.

Features of Our Tapes



OUR BUILDING BLOCKS

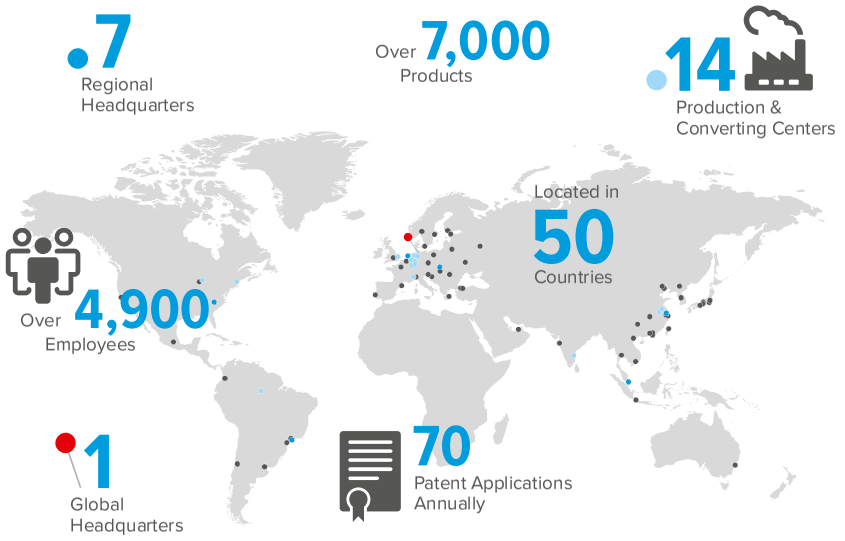
Features and Benefits

Layers		Features and benefits	
Backings/carriers			
PET		• Excellent dimensional stability and tear resistance • Precise die-cutting	• Available in transparent, white, black, and solid black color
Foam		• PE and acrylic type • Very good sealing properties • High shock and tension absorption • Excellent levering of manufacturing tolerance	• PET film reinforcement optional • Available in low thicknesses to meet electronic designs
Non-woven		• Highly conformable and shock-absorbing • Good dimensional stability	• Translucent
Electrically conductive special		• Electrically conductive backings • Special foams	• Non-woven, woven
Adhesives			
Tackified acrylic		• Well-balanced adhesive systems for general mounting and lamination applications	• Excellent aging resistance
Pure acrylic		• High temperature resistance • Excellent shear resistance • High UV resistance	• Very low VOC and corrosive ion content • Available versions: standard and optically clear
Heat-activated		Heat-activated adhesive systems for extremely strong bonds. Available versions: • Reactive adhesive with superior chemical and aging resistance • Reactive adhesive with superior shock resistance	• Reactive adhesive activated at low-temperature and pressure • Thermoplastic adhesive (non-curing)
Special		Available versions: • High shock- and push-out-resistant adhesives • Repulsion-resistant adhesive • Water vapor barrier adhesive	• Silicone surface adhesive • Electrically conductive adhesive • Bond & Detach adhesive
Liners			
Glassine paper		• Paper liners with a thickness of 70 µm • Economical solution	• Available in brown with blue tesa logo and in white with red tesa logo
PE-coated paper		• PE-coated paper liners with a thickness of 120–130 µm	• Excellent humidity resistance • Available in white with blue tesa logo
PET		• Filmic (PET) liners • Available in various thicknesses from 12–75 µm	• Double-liner versions on request

BY YOUR SIDE

A Global Partner providing Local Support

We are one of the leading global manufacturers of self-adhesive tapes. Our product solutions prove their performance in countless industrial sectors around the globe. Our sales offices, R&D centers, and production facilities offer worldwide support. The nearest office is just a call away – contact us.



Your Local Contacts

Germany
Hugo-Kirchberg-Straße 1
22848 Norderstedt | Germany
+49 40 888 99 0
electronics@tesa.com

China
No. 1, 2500 Lane Xiu Pu Road
201315 Pudong | Shanghai, China
+86 21 6818 3110
electronics@tesa.com

South East Asia
9 North Buona Vista Drive
04-01 The Metropolis Tower 1
138588 | Singapore
+65 6697 9888
electronics@tesa.com

USA
111 W Evelyn Ave Suite 215
Sunnyvale, CA 94086 | USA
+1 650 996 8131
electronics@tesa.com

Japan
1-27-6 Shirokane, Shirokane Takanawa
Station Bldg 8F Minato-ku
708-0072 | Tokyo, Japan
+81 3 6833 2300
electronics@tesa.com

Korea
City Air Tower, Office 1805
36 Teheran-ro 87-gil, Gangnam-gu
Seoul 06164 | Korea
+82 2 34300 100
electronics@tesa.com

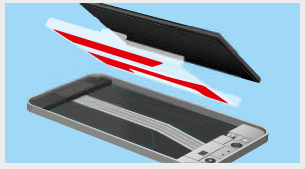
DOUBLE-SIDED FILM TAPES

High Performance Profile

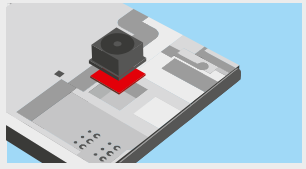
When mobile phones became available to the mass market in the 1990s, tesa was already part of this success story with its double-sided film tapes. Since then, our adhesive solutions have continued to develop in line with the steadily increasing requirements of the electronics industry. Our many years of experience in close proximity to our customers led to the development of dedicated adhesive systems for a wide range of applications. Today, our high performance profile tapes are the spearhead of our film tapes assortment. All series in this category are characterized by **superior bonding performance**, which is expressed in peel adhesion, push-out and shear resistance, and **high impact resistance**. Therefore, these series are used for demanding applications like lens or battery mounting. The PET backings used in these series provide a **very good die-cuttability**.

Typical applications of our high-performance film tapes

Lens and touch panel mounting
- High bonding/push-out performance
- Impact resistance



Battery mounting
- Permanent battery mounting or battery wrapping
- High bonding performance
- Impact resistance



Component mounting
- Challenging applications with higher demands on the overall performance

tesa® 613xx

Our 613xx series offers excellent bonding strength, and a superior push-out performance. With the transparent or black PET backing tesa® 613xx guarantees efficient handling in converting processes.

Push-out

High bonding

tesa® 618xx

For the tesa® 618xx series an advanced acrylic blend adhesive with excellent push-out and shock performance on different surfaces is used. tesa® 618xx also shows a very good bonding performance on LSE substrates. The black PET backing allows good handling in converting processes and easy detection of die-cuts.

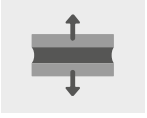
Push-out

Impact resistance

LSE performance

tesa® 6896x

Our tesa® 6896x offers outstanding bonding strength and very good shear resistance. The 6896x series also has a very good anti-repulsion performance and quick-bonding properties.



High bonding

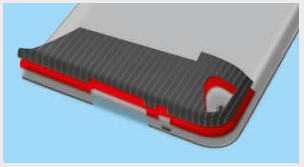
Quick bonding

LSE performance

Specialized Performance Profiles

With this assortment, we created double-sided mounting tapes with unique adhesives focusing on the special requirements of certain applications in the electronics industry. Each series within this assortment is focused on a specific property needed in the market. In this section you will find a selection of specialized film tapes. If you are looking for a property other than those presented here, please contact your local representative. We have much more in our portfolio.

Typical applications of our specialized film tapes



Our specialized film tape solutions are suitable for applications with a high demand for a certain property like anti-repulsion, differential bonding performance, chemical resistance, reworkability, or light-blocking. These tapes are suitable for a wide range of applications, from mounting (e.g., FPC, antenna, keypad, sensor) to processing and packaging applications.

tesa® 689xx/669xx

A special repulsion-resistant adhesive makes our 689xx/669xx series the perfect solution to bond on curved surfaces even under harsh environmental conditions.

Anti-repulsion

tesa® 615xx

The 615xx series is a special differential PET tape, with a silicone adhesive on the one side and an acrylic adhesive on the other side. The silicone side allows very good tack and mounting performance to different silicone or silicone-containing substrates.

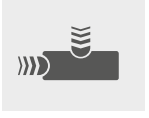
Si/Ac differential

LSE performance

tesa® 6128x

Our 6128xx series has a special adhesive with excellent chemical resistance properties, against most polar and nonpolar chemicals. It also provides very good and reliable bonding performance to many different substrates. The double PET liner and the black PET backing allow easy handling in converting processes.

Chemical resistance

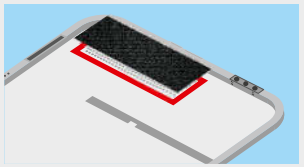
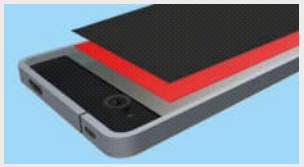


Impact resistance

Well-Balanced Performance Profile

tesa balanced performance film tapes are a proven solution for mounting and lamination applications in the electronics industry. The balanced adhesive provides **very good tack** and **bonding performance** for many general applications. The PET backing used enables **easy handling** of the tape during converting and manufacturing processes. With thicknesses from 5 µm to 250 µm this assortment offers a broad range and high flexibility to you.

Typical applications of our balanced film tapes

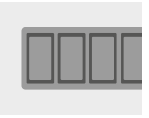

This assortment is widely used in the electronics industry for versatile mounting and lamination applications as well as for cushioning and gasket material bonding.

tesa® 49xx/519xx

Our 49xx/519xx series enjoy an excellent reputation in the market. The overall bonding performance of these series is well-balanced and therefore suitable for a wide range of applications.

Furthermore, the flexible PET backing provides good wetting behavior, fiber-free die-cutting, and good dimensional stability.

Balanced properties



Good die-cutting

Can't Find the Right Solution?

We have more options available in our portfolio and by partnering with you we can create unique and specialized products that meet your individual demands.

Simply write to us or contact your local representative.

electronics@tesa.com

ASSORTMENT OVERVIEW

Double-sided Film Tapes

Series	Product	Thickness [µm]	Color	Adhesive	Backing	Peel adhesion [N/cm; initial/ultimate] SUS	Push-out [N]	DuPont [J; xy/z]	Product description
tesa® 613xx	tesa® 61305	50	Transparent	Modified acrylic	PET	10.3/12.9	250	0.5/0.2	Push-out resistant, high bonding
	tesa® 61360	100	Transparent	Modified acrylic	PET	11.9/16.5	250	0.5/0.2	Push-out resistant, high bonding
	tesa® 61370	125	Transparent	Modified acrylic	PET	12.5/15.2	260	0.6/0.2	Push-out resistant, high bonding
	tesa® 61380	150	Transparent	Modified acrylic	PET	12.8/15.7	220	0.7/0.2	Push-out resistant, high bonding
	tesa® 61390	200	Transparent	Modified acrylic	PET	13.0/15.8	200	0.7/0.2	Push-out resistant, high bonding
	tesa® 61350	50	Black	Modified acrylic	PET	9.6/12.7	255	0.5/0.2	Push-out resistant, high bonding
	tesa® 61365	100	Black	Modified acrylic	PET	11.9/16.5	250	0.5/0.2	Push-out resistant, high bonding
	tesa® 61375	125	Black	Modified acrylic	PET	12.5/15.2	260	0.6/0.2	Push-out resistant, high bonding
	tesa® 61385	150	Black	Modified acrylic	PET	12.8/15.7	220	0.7/0.2	Push-out resistant, high bonding
	tesa® 61335	200	Black	Modified acrylic	PET	14.3/18.6	250	0.6/0.2	Push-out resistant, high bonding
	tesa® 61395	200	Black	Modified acrylic	PET	13.0/15.8	200	0.7/0.2	Push-out resistant, high bonding
	tesa® 61345	230	Black	Modified acrylic	PET	16.0/17.0	210	0.7/0.2	Push-out resistant, high bonding
	tesa® 61325	250	Black	Modified acrylic	PET	16.2/19.2	210	0.8/0.2	Push-out resistant, high bonding
	tesa® 61315	300	Black	Modified acrylic	PET	21.0/24.0	200	0.9/0.2	Push-out resistant, high bonding
tesa® 618xx	tesa® 61865	100	Black	Modified acrylic	PET	11.0/12.0	240	0.7/0.3	Push-out resistant, impact-resistant, LSE performance
	tesa® 61885	150	Black	Modified acrylic	PET	13.5/14.0	230	1.0/0.3	Push-out resistant, impact-resistant, LSE performance
	tesa® 61895	200	Black	Modified acrylic	PET	14.0/15.0	210	1.2/0.4	Push-out resistant, impact-resistant, LSE performance
	tesa® 61845	230	Black	Modified acrylic	PET	15.0/16.0	230	1.2/0.4	Push-out resistant, impact-resistant, LSE performance
	tesa® 61825	250	Black	Modified acrylic	PET	17.0/15.0	230	1.2/0.4	Push-out resistant, impact-resistant, LSE performance
	tesa® 61815	300	Black	Modified acrylic	PET	20.0/21.0	240	1.2/0.4	Push-out resistant, impact-resistant, LSE performance
tesa® 6896x	tesa® 68962	50	Transparent	Specialty	PET	12.1/12.5	278	0.5/0.3	High peel adhesion, quick bonding, LSE performance
	tesa® 68964	100	Transparent	Specialty	PET	17.0/17.5	255	0.7/0.6	High peel adhesion, quick bonding, LSE performance
tesa® 689xx	tesa® 68905	50	Transparent	Modified acrylic	PET	5.5/8.5	173	0.3/0.1	Repulsion resistant even under harsh environmental conditions
	tesa® 68910	100	Transparent	Modified acrylic	PET	7.9/12.5	213	0.4/0.1	Repulsion resistant even under harsh environmental conditions
tesa® 669xx	tesa® 66905	50	Black	Modified acrylic	PET	4.5/6.8	162	0.4/0.1	Repulsion resistant even under harsh environmental conditions
	tesa® 66910	100	Black	Modified acrylic	PET	7.1/10.5	229	0.3/0.1	Repulsion resistant even under harsh environmental conditions
tesa® 615xx	tesa® 61526	30	Transparent	Silicone/acrylic	PET	Si: 4.0/4.7 Ac: 6.8/7.7	Upon request	Upon request	Differential design (Si/Ac) for silicone substrates
	tesa® 61532	50	Transparent	Silicone/acrylic	PET	Si: 4.8/4.9 Ac: 7.0/9.9	Upon request	Upon request	Differential design (Si/Ac) for silicone substrates
	tesa® 61528	100	Transparent	Silicone/acrylic	PET	Si: 4.0/4.4 Ac: 10.7/12.6	Upon request	Upon request	Differential design (Si/Ac) for silicone substrates
	tesa® 61529	140	Transparent	Silicone/acrylic	PET	Si: 4.2/4.4 Ac: 11.2/12.6	Upon request	Upon request	Differential design (Si/Ac) for silicone substrates
	tesa® 61520	200	Transparent	Silicone/acrylic	PET	Si: 4.2/4.4 Ac: 14.7/16.5	Upon request	Upon request	Differential design (Si/Ac) for silicone substrates

Continued on next page

ASSORTMENT OVERVIEW

Double-sided Film Tapes

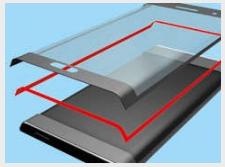
Series	Product	Thickness [µm]	Color	Adhesive	Backing	Peel adhesion [N/cm; initial/ultimat] SUS	Push-out [N]	DuPont [J; xy/z]	Product description
tesa® 612xx	tesa® 61282	50	Black	Specialty	PET	4.5/7.0	168	0.7/0.4	Chemical resistant, impact-resistant
	tesa® 61284	100	Black	Specialty	PET	8.5/12.5	161	1.2/0.8	Chemical resistant, impact-resistant
	tesa® 61286	150	Black	Specialty	PET	13.1/15.0	170	1.3/1.0	Chemical resistant, impact-resistant
	tesa® 61287	200	Black	Specialty	PET	14.0/19.0	168	1.3/1.1	Chemical resistant, impact-resistant
	tesa® 61288	250	Black	Specialty	PET	19.0/20.0	164	1.5/1.3	Chemical resistant, impact-resistant
tesa® 49xx	tesa® 4912	5	Transparent	Modified acrylic	PET	3.6/3.9	Upon request	Upon request	Balanced property profile for universal applicability
	tesa® 4983	30	Transparent	Modified acrylic	PET	5.2/7.6	88	0.2/0.1	Balanced property profile for universal applicability
	tesa® 4972	50	Transparent	Modified acrylic	PET	7.0./9.6	177	0.4/0.2	Balanced property profile for universal applicability
	tesa® 4980	80	Transparent	Modified acrylic	PET	8.6/9.7	118	0.4/0.2	Balanced property profile for universal applicability
	tesa® 4982	100	Transparent	Modified acrylic	PET	8.2/11.7	230	0.5/0.2	Balanced property profile for universal applicability
	tesa® 4928	125	Transparent	Modified acrylic	PET	9.6/12.0	220	0.7/0.2	Balanced property profile for universal applicability
	tesa® 4942	140	Transparent	Modified acrylic	PET	10.3/12.7	210	0.8/0.2	Balanced property profile for universal applicability
	tesa® 4967	160	Transparent	Modified acrylic	PET	11.3/13.4	210	0.8/0.3	Balanced property profile for universal applicability
	tesa® 4965	200	Transparent	Modified acrylic	PET	11.5/11.8	140	0.9/0.4	Balanced property profile for universal applicability
	tesa® 4926	250	Transparent	Modified acrylic	PET	13.8/16.2	120	1.1/0.4	Balanced property profile for universal applicability
tesa® 519xx	tesa® 51983	30	Black	Modified acrylic	PET	5.2/7.6	74	0.2/0.1	Balanced property profile for universal applicability
	tesa® 51972	50	Black	Modified acrylic	PET	7.0/9.6	180	0.4/0.2	Balanced property profile for universal applicability
	tesa® 51980	80	Black	Modified acrylic	PET	8.6/9.7	118	0.4/0.2	Balanced property profile for universal applicability
	tesa® 51982	100	Black	Modified acrylic	PET	8.2/11.7	230	0.5/0.2	Balanced property profile for universal applicability
	tesa® 51928	125	Black	Modified acrylic	PET	9.6/12	220	0.7/0.2	Balanced property profile for universal applicability
	tesa® 51967	160	Black	Modified acrylic	PET	11.3/13.4	210	0.8/0.3	Balanced property profile for universal applicability
	tesa® 51965	200	Black	Modified acrylic	PET	11.5/11.8	140	0.9/0.4	Balanced property profile for universal applicability
	tesa® 51926	250	Black	Modified acrylic	PET	13.8/16.2	120	1.1/0.4	Balanced property profile for universal applicability

IMPACT-RESISTANT FOAM TAPES

Acrylic Foam Tapes – For Applications with Extreme Requirements

The bonding of components in electronic devices can be very challenging. For many applications high-tech materials with special structures and properties are used. The components are characterized by complex geometries to meet the latest design requirements of the consumer. Our acrylic foam tape assortment is especially designed for demanding applications in the electronics industry and is distinguished by its very special bonding capabilities. The high bonding performance is based on its viscoelasticity: elastic and viscous characteristics providing inner strength as well as relaxation of mechanical stresses. The use of highly innovative technologies and special acrylic adhesive systems together with the viscoelastic nature of acrylic foams create multiple benefits like **impact resistance, high bonding strength,** and **waterproofing** for electronic devices for the entire life cycle of the product.

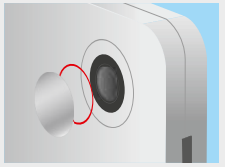
Typical applications of our ACF assortment



Lens mounting
- High demands on bonding and shock performance
- Challenging new designs
- Special requirements (e.g., chemical resistance)

Back cover mounting
- Requiring superior bonding strength and anti-repulsion properties
- Outstanding sealing performance

Display bottom
- Demand for high bonding strength and impact resistance



Component mounting with special demands
- Ultra-slim bezel design requirements (e.g., superior bonding strength, processability)
- Need for chemical-resistant solutions

tesa® ACF 756xx

ACF 756xx is our product family that combines outstanding adhesion properties on a wide range of surfaces and a high level of conformability. This allows perfect attachment to the curves and corners of the electronic device and provides a permanent seal against water and dust. 754xx is a thickness extension of 756xx, and offers the thinnest foam tape (50 µm) available in the market.

Best bonding

Conformable

tesa® ACF 757xx

Besides the ACF-technology-related impact resistance and bonding strength the acrylic adhesive system used for our ACF 757xx family enables a good wetting, which creates a powerful bond on materials with different surface characteristics. This product family is equipped with a film (PET) reinforcement allowing excellent reworkability and die-cuttability.

Reworkable

Good wetting

tesa® ACF 759xx

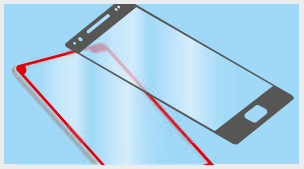
Whether in business, vacation, or sports, devices are challenged to survive from chemicals such as perfume, sun spray or sweat. Normally, pressure-sensitive adhesive tapes face huge problems when they come in contact with chemicals due to a significant loss of bonding strength. Where other tape technologies fail, our ACF 759xx family shows an impressive performance against a variety of different chemicals. This superior chemical resistance is a result of this product's unique adhesive formulation. Of course, this series also provides the standard features of the viscoelastic acrylic foam technology.

Chemical resistance

PE Foam Tapes – For Challenging Applications

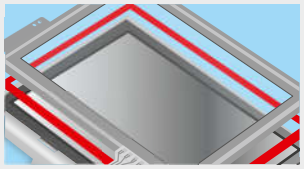
PE Foam Tapes have long proven their value to the electronics industry. Certain properties such as **impact resistance**, **bonding strength,** and **waterproofing** are offered by all series in our PEF range. On this page we present a selection of our PEF solutions. If you require more information about this assortment, please contact your local representative.

Typical applications of our PEF series



Lens mounting
- High demands on bonding and shock performance
- Challenging new designs

Back cover mounting
- Requiring superior bonding strength and anti-repulsion properties
- Outstanding sealing performance



Touch panel mounting
- High demands on bonding and shock performance

tesa® PEF 668xx

Our most popular PEF 668xx series has a different product design than the AC Foam tapes. The combination of a closed-cell high-density PE Foam backing and a modified acrylic adhesive provides a well-balanced and very good overall performance. The backing enables a clean removal from the bonding area, while the specially developed adhesive prevents lifting in applications with curved designs.

Anti-repulsion

Best impact resistance

tesa® PEF 626xx

The PEF 626xx series captivates with outstanding adhesive strengths. It is available in two variants - with and without PET reinforcement, which improves the die-cuttability, reworkability, and ease of handling. The foam backing is softer and more compressible compared to other PE foam series.

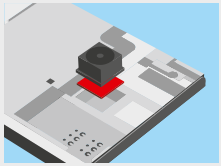
Best bonding

Compressible

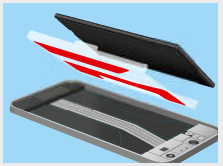
Special Foam Tapes – For Special Requirements

Our SPF products focus on special requirements such as **excellent reworkability**. These properties are provided by specific, tailor-made adhesive designs. Additionally, our SPF series, like the other foam assortments, offers excellent **impact resistance** and **bonding performance**.

Typical applications of our SPF series



Component mounting
- Component protection with shock resistance and high bonding strength
- Easy removability



Battery wrapping
- High bonding strength
- Superior impact resistance
- Easy removability

Battery mounting
- High bonding strength
- Superior impact resistance
- Easy removability

Back cover mounting
- Requiring superior bonding strength
- High need for reworkability
- LSE substrates
- Quick bonding with low pressure

tesa® SPF 761xx

In our synthetic foam series SPF 761xx the special foamed adhesive combined with a PET backing leads to outstanding reworkability properties: fast and totally clean – no tearing, no residues. This series provides fast wetting and good bonding – also on LSE substrates. Additionally, the black design with PET backing provides light-blocking properties and good die-cuttability.

Fast & residue-free removal

Quick bonding

LSE performance

Can't Find the Right Solution?

We have more options available in our portfolio and by partnering with you we can create unique and specialized products that meet your individual demands.

Simply write to us or contact your local representative.

electronics@tesa.com

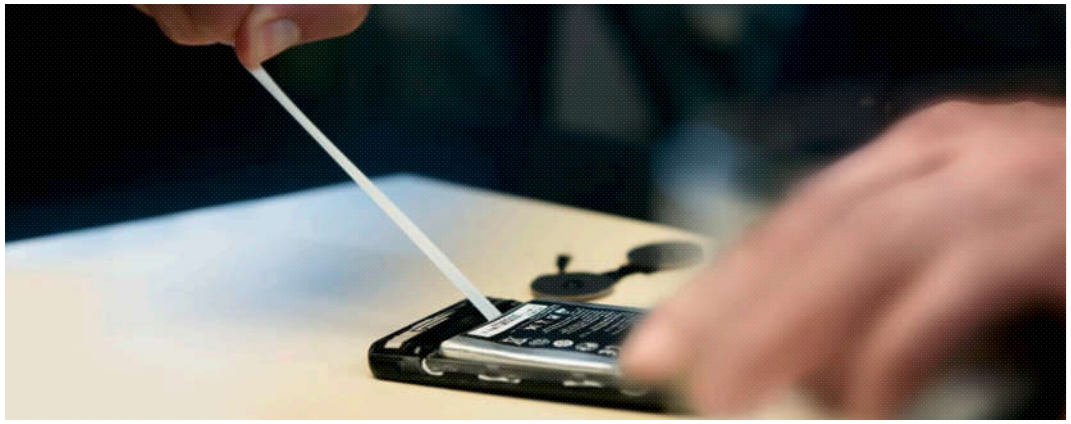
ASSORTMENT OVERVIEW

Impact-Resistant Foam Tapes

Series	Product	Thickness [µm]	Color	Adhesive	Backing	Peel adhesion [N/cm; initial/ultimate]		Push-out [N]	DuPont test [J; xy/z]	Anti-repulsion*	Removability*
						SUS	PE				
tesa® ACF 754xx	tesa® ACF 75405	50	Black	Acrylic	-	9.1/10.3	4.3/5.5	235	0.6/0.5	•••	•
	tesa® ACF 75410	100	Black	Acrylic	-	11.6/13.1	6.2/6.7	216	0.8/0.7	•••	•
	tesa® ACF 75415	150	Black	Acrylic	-	14.1/15.6	6.6/7.2	206	1.0/0.8	••••	•
tesa® ACF 756xx	tesa® ACF 75620	200	Black	Acrylic	-	11.2/17.0	1.3/.18	223	1.3/1.0	•••	•
	tesa® ACF 75625	250	Black	Acrylic	-	15.4/19.9	1.5/2.0	215	1.4/1.1	•••	••
	tesa® ACF 75630	300	Black	Acrylic	-	17.5/19.0	2.1/2.9	201	1.5/1.2	•••	••
	tesa® ACF 75635	350	Black	Acrylic	-	16.6/19.9	3.1/4.4	187	>1.6/1.3	••••	••
	tesa® ACF 75640	400	Black	Acrylic	-	16.8/22.0	3.7/6.6	169	>1.6/1.4	••••	••
tesa® ACF 757xx	tesa® ACF 75710	100	Black	Acrylic	PET	8.1/11.2	4.5/5.0	230	0.6/0.5	•••	•••
	tesa® ACF 75715	150	Black	Acrylic	PET	10.4/13.5	5.0/5.0	218	0.7/0.6	•••	•••
	tesa® ACF 75720	200	Black	Acrylic	PET	11.3/13.5	6.8/7.0	204	0.9/0.8	•••	•••
	tesa® ACF 75723	200	Black	Acrylic	PET	11.9/13.6	7.1/7.1	198	1.0/0.8	•••	•••
	tesa® ACF 75725	250	Black	Acrylic	PET	12.0/13.6	7.1/7.1	196	0.9/0.8	••••	•••
	tesa® ACF 75730	300	Black	Acrylic	PET	12.7/14.2	8.0/8.0	194	1.0/8.7	••••	•••
	tesa® ACF 75735	350	Black	Acrylic	PET	12.9/14.6	8.5/10.0	178	1.1/0.9	••••	•••
	tesa® ACF 75745	250	White	Acrylic	PET	12.0/13.6	7.1/7.1	196	0.9/0.8	••••	•••
tesa® ACF 759xx	tesa® ACF 75920	200	Black	Acrylic	PET	10.2/11.3	1.3/1.6	160	1.2/0.9	Upon request	•••
	tesa® ACF 75925	250	Black	Acrylic	PET	12.5/13.1	1.5/2.6	153	1.4/0.8	Upon request	•••
	tesa® ACF 75930	300	Black	Acrylic	PET	13.8/14.2	1.7/2.6	150	1.6/1.0	Upon request	•••
tesa® PEF 668xx	tesa® PEF 66822	150	Black	Acrylic	PE Foam	9.0/10.7	2.0/4.5	240	0.6/0.5	•••	•••
	tesa® PEF 66824	200	Black	Acrylic	PE Foam	11.5/ 14.0	5.0/5.8	243	0.8/0.7	••••	•••
	tesa® PEF 66825	250	Black	Acrylic	PE Foam	11.8/14.3	5.5/6.2	250	0.8/0.7	••••	•••
	tesa® PEF 66826	300	Black	Acrylic	PE Foam	12.5/14.4	6.0/ 6.5	252	0.9/0.8	••••	•••
	tesa® PEF 66828	400	Black	Acrylic	PE Foam	12.6/14.8	8.3/9.5	250	1.1/1.0	•••	•••
	tesa® PEF 66865	250	White	Acrylic	PE Foam	11.0/14.5	5.2/5.7	236	0.7/0.7	••••	•••
	tesa® PEF 66866	300	White	Acrylic	PE Foam	11.5/14.5	5.5/6.1	240	0.8/0.7	••••	•••
tesa® PEF 626xx	tesa® PEF 62622	150	Black	Acrylic	PE Foam	13.0/13.0	1.5/2.5	200	0.4/0.3	•	••
	tesa® PEF 62624	200	Black	Acrylic	PE Foam	13.0/16.0	2.2/4.1	200	0.4/0.4	•	••
	tesa® PEF 62625	250	Black	Acrylic	PE Foam	13.0/16.0	2.2/4.1	190	0.5/0.4	•	••
	tesa® PEF 62626	300	Black	Acrylic	PE Foam	10.0/13.5	2.3/3.5	190	0.4/0.4	•	•••
	tesa® PEF 62645	250	Black	Acrylic	PE Foam with PET reinforcement	13.0/16.0	5.0/6.0	180	0.5/ 0.4	•	•••
	tesa® PEF 62646	300	Black	Acrylic	PE Foam with PET reinforcement	10.0/13.5	2.4/3.2	180	0.5/0.4	•	•••
	tesa® PEF 62648	400	Black	Acrylic	PE Foam with PET reinforcement	10.0/13.5	3.0/2.9	180	0.5/0.5	•	•••
tesa® SPF 761xx	tesa® SPF 76105	50	Black	Specialty	PET	6.0/6.0	5.0/5.0	50	0.6/0.5	••	••••
	tesa® SPF 76110	100	Black	Specialty	PET	9.0/9.0	7.0/7.0	100	0.8/0.7	•••	••••
	tesa® SPF 76115	150	Black	Specialty	PET	11.0/11.0	8.0/8.0	150	1.0/0.9	•••	••••
	tesa® SPF 76120	200	Black	Specialty	PET	11.0/11.0	10.0/10.0	180	1.1/1.0	•••	••••
	tesa® SPF 76125	250	Black	Specialty	PET	12.0/12.0	10.0/10.0	200	1.4/1.1	•••	••••
	tesa® SPF 76130	300	Black	Specialty	PET	12.0/12.0	11.0/11.0	210	1.4/1.1	•••	••••

* Assessment is done only in relation to other products of this assortment •••• Superior ••• Very good •• Good • Low

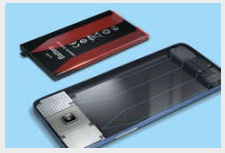
BOND & DETACH®



Stretch-Release Tapes for Residue-Free Removability

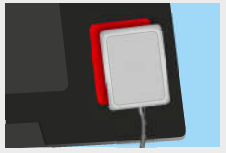
With our Bond & Detach® solutions, we revolutionized reworkability by developing tapes that permanently mount components but leave the option to easily remove them for repairing or recycling purposes without leaving residues.

Typical applications of our Bond & Detach® assortment

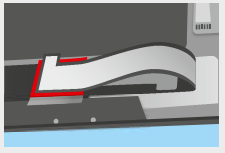


Battery mounting in mobile devices
- Reliable bonding, impact resistance, and low shifting
- Matches the EU Battery Directive

Mounting of high value or critical components
- Component protection with impact resistance and high bonding strength
- Fast, secure, and cost-efficient repairing and recycling



Removable mounting of devices or accessories
- High initial and ultimate bonding strength
- Residue-free removability



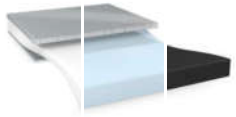
Temporary fixation of components
- Quick, reliable bonding
- Easily removable without leaving residues

The tesa Bond & Detach® technology

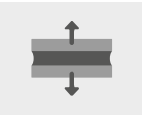
Bond & Detach® is an extraordinary adhesive technology used for demanding bonding applications that provides the **option to be removed residue-free by stretching**. The unique and patented technology was developed by tesa and offers the possibility of **simple and secure reworkability** during the entire product life cycle of an electronic device – from production to end of life. Besides that the whole Bond & Detach® assortment provides **very good impact resistance and bonding strength, even on LSE substrates**.

tesa Bond & Detach® 704xx/703xx/706xx

These series are designed for applications demanding high bonding strength and reworkability. They have the best bonding performance within the Bond & Detach® assortment and they are available in a broad range of thicknesses and different colors. The black series 706xx offers good light-blocking properties.



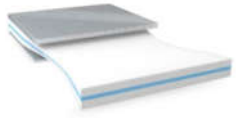
Fast & residue-free removal



Best bonding

tesa Bond & Detach® 672xx

In addition to the general Bond & Detach® features, the special cushioning adhesive used for the 672xx series provides improved impact resistance. The removability of these products is also improved by the stretchable PU backing used.

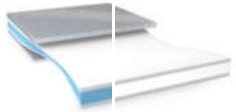


Fast & residue-free removal

Impact resistance

tesa Bond & Detach® 770xx/648xx

The performance of these highly impact-resistant and very tacky series is based on the innovative tesa foaming technology. The backing is a new development with the specific goal to further improve the removability of these products by enhancing the tear resistance and reducing the force required to remove the tape.



Fast & residue-free removal

Impact resistance

Quick bonding

Your Benefits with Our Stretch-Release Technology

Residue-free removability by stretching ...

... is easy. Just pull the tape

... is safe. For health, the environment, and components

... is fast. No cleaning or other process steps, cost-efficient process

ASSORTMENT OVERVIEW

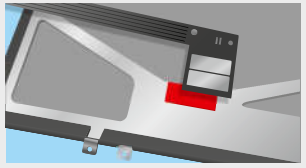
Bond & Detach®

Series	Product	Thickness [µm]	Color	Adhesive	Backing	Peel adhesion [N/cm; initial/ultimate]			Impact resistance		Removing force [N/cm]
						SUS	PE	Black battery pouch	DuPont [J; xy/z]	Tumbler [cycles]	
tesa Bond & Detach® 770xx	tesa Bond & Detach® 77010	100	Translucent	Specialty	Stretchable specialty	9.0/9.0	6.0/7.0	6.0/7.0	0.8/0.6	100	1.5
	tesa Bond & Detach® 77015	150	Translucent	Specialty	Stretchable specialty	10.0/10.0	7.0/8.0	7.0/8.0	1.0/0.7	>500	2.0
tesa Bond & Detach® 648xx	tesa Bond & Detach® 64815	150	White	Specialty	Stretchable specialty	12.0/12.0	10.0/10.0	9.0/9.0	1.1/0.8	>500	2.0
tesa Bond & Detach® 672xx	tesa Bond & Detach® 67208	80	White	Specialty	Stretchable PU	5.0/5.0	4.0/4.0	4.0/4.0	0.7/0.5	95	4.0
	tesa Bond & Detach® 67210	100	White	Specialty	Stretchable PU	6.0/6.0	5.0/5.0	5.0/6.0	0.8/0.6	180	4.0
	tesa Bond & Detach® 67215	150	White	Specialty	Stretchable PU	9.0/9.0	6.0/6.0	7.0/7.0	1.0/0.7	400	5.0
tesa Bond & Detach® 706xx	tesa Bond & Detach® 70610	100	Black	Specialty	-	11.0/11.0	6.0/6.0	7.0/7.0	0.5/0.2	Upon request	3.0
	tesa Bond & Detach® 70613	130	Black	Specialty	-	11.0/11.0	7.0/7.0	8.0/8.0	Upon request	Upon request	3.0
	tesa Bond & Detach® 70615	150	Black	Specialty	-	13.0/13.0	7.0/7.0	8.0/8.0	0.7/0.3	Upon request	3.0
	tesa Bond & Detach® 70620	200	Black	Specialty	-	14.0/14.0	8.0/8.0	9.0/9.0	0.8/0.4	Upon request	4.0
	tesa Bond & Detach® 70625	250	Black	Specialty	-	16.0/16.0	8.0/8.0	9.0/9.0	0.9/0.5	Upon request	5.0
	tesa Bond & Detach® 70640	400	Black	Specialty	-	19.0/19.0	9.0/9.0	Upon request	1.1/0.8	Upon request	7.0
	tesa Bond & Detach® 70650	500	Black	Specialty	-	20.0/20.0	10.0/10.0	Upon request	1.3/1.0	Upon request	8.0
	tesa Bond & Detach® 70665	650	Black	Specialty	-	22.0/22.0	11.0/11.0	Upon request	1.4/1.2	Upon request	9.0
	tesa Bond & Detach® 70680	800	Black	Specialty	-	24.0/24.0	12.0/12.0	Upon request	1.5/1.3	Upon request	10.0
tesa Bond & Detach® 704xx	tesa Bond & Detach® 70410	100	White	Specialty	-	11.0/11.0	8.0/8.0	7.0/7.0	0.6/0.2	Upon request	3.0
	tesa Bond & Detach® 70415	150	White	Specialty	-	13.0/13.0	8.0/8.0	7.0/7.0	0.8/0.4	25	4.0
	tesa Bond & Detach® 70420	200	White	Specialty	-	14.0/14.0	9.0/9.0	8.0/8.0	0.9/0.5	Upon request	5.0
	tesa Bond & Detach® 70425	250	White	Specialty	-	16.0/16.0	9.0/9.0	8.0/8.0	1/0.6	Upon request	6.0
	tesa Bond & Detach® 70430	300	White	Specialty	-	19.0/19.0	9.0/9.0	Upon request	1.1/0.7	Upon request	6.0
	tesa Bond & Detach® 70435	350	White	Specialty	-	20.0/20.0	10.0/10.0	Upon request	1.1/0.8	Upon reque st	7.0
	tesa Bond & Detach® 70440	400	White	Specialty	-	22.0/22.0	10.0/10.0	Upon request	1.2/0.9	Upon request	7.0
	tesa Bond & Detach® 70465	650	White	Specialty	-	25.0/25.0	12.0/12.0	Upon request	1.4/1.2	Upon request	9.0
	tesa Bond & Detach® 70480	800	White	Specialty	-	27.0/27.0	15.0/15.0	Upon request	1.5/1.3	Upon request	10.0
	tesa Bond & Detach® 70499	1,000	White	Specialty	-	30.0/30.0	19.0/19.0	Upon request	1.6/1.5	Upon request	11.0
tesa Bond & Detach® 703xx	tesa Bond & Detach® 70315	150	Transparent	Specialty	-	12.0/12.0	7.0/7.0	8.0/8.0	0.6/0.2	Upon request	3.0
	tesa Bond & Detach® 70350	500	Transparent	Specialty	-	23.0/23.0	12.0/12.0	Upon request	1.2/0.7	Upon request	6.0

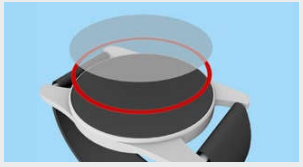
STRUCTURAL BONDING SOLUTIONS

Electronic devices are increasingly miniaturized and sophisticated. Complex designs require smaller bonding areas and higher tape performance. tesa® structural bonding solutions meet the most challenging demands of manufacturers and consumers over the life cycle of the devices. They provide **high structural bonding performance** to a wide variety of substrates with both fast and durable bonds. They **withstand the harshest conditions** by combining **outstanding chemical and aging resistance** with **excellent sealing properties.** The processing of these adhesive systems is simplified due to excellent die-cuttability, immediate handling stability after heat activation, and low oozing.

Typical applications of our structural bonding solutions



Component mounting
- Thin and narrow die-cuts
- Repulsion resistance
- Temperature resistance



Lens and back cover mounting
- Chemical resistance
- Impact resistance
- Reliable sealing properties

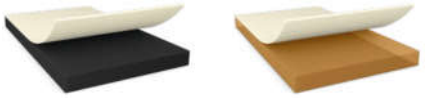
Soft goods and accessories
- Bonding of temperature-sensitive substrates
- Aging resistance
- Wettability on fabrics

Heat-Activated Films

Our tesa HAF® and tesa® XPU series are thermosetting adhesive systems. An irreversible cross-linking reaction is initiated by heat and pressure starting at temperatures above 110°C.

tesa HAF® 5847x/847x

tesa HAF® is a heat-activated film based on phenolic resin and nitrile rubber. It is activated by heat and pressure starting at temperatures above 120°C, resulting in extremely strong bonds and outstanding reliability.



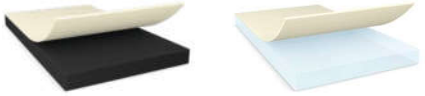
>120°C
Activation temperature

Chemical resistance

Temperature resistance

tesa® XPU 5870x/870x

tesa® Cross-Linkable Polyurethane (XPU) is activated by very low bonding pressure and temperatures from 110°C to 200°C. Our XPU series offer strong and reliable bonding strength – even on combinations of different substrates like plastics and metals.



>110°C
Activation temperature

Low bonding pressure

Impact resistance

Low-Temperature Reactive Films

Our tesa® Low-Temperature Reactive Film (LTR) has been designed for activation at moderate temperatures. The cross-linking starts at a bond-line temperature above 75°C.

tesa® LTR 5848x/871x/872x

tesa® LTR is especially recommended for the reliable bonding of temperature-sensitive substrates. The LTR 5848x and 871x series bond extremely well to plastics and leather, while LTR 872x is specifically designed for the bonding of fabrics.

>75°C
Activation temperature

Wettability on fabrics

Impact resistance

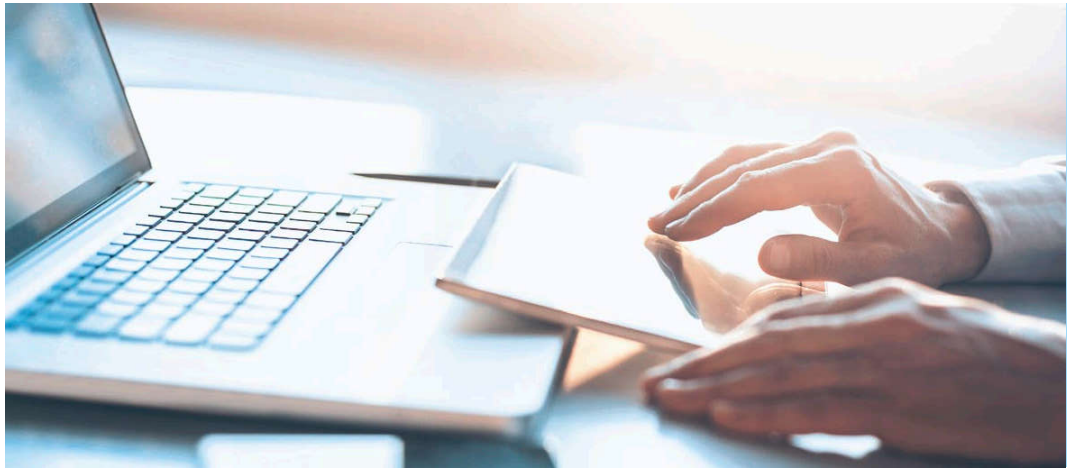
ASSORTMENT OVERVIEW

Structural Bonding Solutions

Series	Product	Thickness [µm]	Color	Adhesive	Activation temperature [°C]	Push-out [MPa]	Dynamic shear [N]	DuPont [J]	Reliability*	Chemical resistance*	Reference
tesa HAF® 847x	tesa HAF® 8471	30	Amber	Nitrile rubber/phenolic resin	>120	>5.5	>7.0	>0.5	••••	••••	SUS/SUS
	tesa HAF® 8472	60	Amber	Nitrile rubber/phenolic resin	>120	>5.5	>7.0	>0.5	••••	••••	SUS/SUS
	tesa HAF® 8473	80	Amber	Nitrile rubber/phenolic resin	>120	>5.5	>7.0	>0.5	••••	••••	SUS/SUS
	tesa HAF® 8474	100	Amber	Nitrile rubber/phenolic resin	>120	>5.5	>7.0	>0.5	••••	••••	SUS/SUS
	tesa HAF® 8475	125	Amber	Nitrile rubber/phenolic resin	>120	>5.5	>7.0	>0.5	••••	••••	SUS/SUS
	tesa HAF® 8476	150	Amber	Nitrile rubber/phenolic resin	>120	>5.5	>7.0	>0.5	••••	••••	SUS/SUS
	tesa HAF® 8478	200	Amber	Nitrile rubber/phenolic resin	>120	>5.5	>7.0	>0.5	••••	••••	SUS/SUS
tesa HAF® 584xx	tesa HAF® 58469	10	Black	Nitrile rubber/phenolic resin	>120	>5.0	>6.0	>0.5	••••	••••	SUS/SUS
	tesa HAF® 58477	20	Black	Nitrile rubber/phenolic resin	>120	>5.5	>7.0	>0.5	••••	••••	SUS/SUS
	tesa HAF® 58471	30	Black	Nitrile rubber/phenolic resin	>120	>5.5	>7.0	>0.5	••••	••••	SUS/SUS
	tesa HAF® 58470	50	Black	Nitrile rubber/phenolic resin	>120	>5.5	>7.0	>0.5	••••	••••	SUS/SUS
	tesa HAF® 58473	80	Black	Nitrile rubber/phenolic resin	>120	>5.5	>7.0	>0.5	••••	••••	SUS/SUS
	tesa HAF® 58474	100	Black	Nitrile rubber/phenolic resin	>120	>5.5	>7.0	>0.5	••••	••••	SUS/SUS
	tesa HAF® 58475	125	Black	Nitrile rubber/phenolic resin	>120	>5.5	>7.0	>0.5	••••	••••	SUS/SUS
	tesa HAF® 58476	150	Black	Nitrile rubber/phenolic resin	>120	>5.5	>7.0	>0.5	••••	••••	SUS/SUS
	tesa HAF® 58478	200	Black	Nitrile rubber/phenolic resin	>120	>5.5	>7.0	>0.5	••••	••••	SUS/SUS
tesa® XPU 870x	tesa® XPU 8701	25	Translucent	Cross-linkable polyurethane	>110	>2.5	n.a.	>3.5	•••	••	AL/PC
	tesa® XPU 8702	50	Translucent	Cross-linkable polyurethane	>110	>3.0	n.a.	>3.5	•••	••	AL/PC
	tesa® XPU 8704	100	Translucent	Cross-linkable polyurethane	>110	>4.0	n.a.	>3.5	•••	••	AL/PC
	tesa® XPU 8706	150	Translucent	Cross-linkable polyurethane	>110	>4.0	n.a.	>3.5	•••	••	AL/PC
	tesa® XPU 8708	200	Translucent	Cross-linkable polyurethane	>110	>4.0	n.a.	>3.5	•••	••	AL/PC
tesa® XPU 5870x	tesa® XPU 58701	25	Black	Cross-linkable polyurethane	>110	>2.5	n.a.	>3.5	•••	••	AL/PC
	tesa® XPU 58702	50	Black	Cross-linkable polyurethane	>110	>3.0	n.a.	>3.5	•••	••	AL/PC
	tesa® XPU 58704	100	Black	Cross-linkable polyurethane	>110	>4.0	n.a.	>3.5	•••	••	AL/PC
	tesa® XPU 58706	150	Black	Cross-linkable polyurethane	>110	>4.0	n.a.	>3.5	•••	••	AL/PC
	tesa® XPU 58708	200	Black	Cross-linkable polyurethane	>110	>4.0	n.a.	>3.5	•••	••	AL/PC
tesa® LTR 871x	tesa® LTR 8711	30	White	Low-temperature reactive	>75	>5.5	n.a.	>3.5	•••	••	PC/PC
	tesa® LTR 8710	50	White	Low-temperature reactive	>75	>5.5	n.a.	>4.0	•••	••	PC/PC
	tesa® LTR 8714	100	White	Low-temperature reactive	>75	>6.5	n.a.	>4.0	•••	••	PC/PC
tesa® LTR 5848x	tesa® LTR 58480	50	Black	Low-temperature reactive	>75	>5.5	n.a.	>4.0	•••	••	PC/PC
	tesa® LTR 58484	100	Black	Low-temperature reactive	>75	>6.5	n.a.	>4.0	•••	••	PC/PC
	tesa® LTR 58486	150	Black	Low-temperature reactive	>75	>7.5	n.a.	>4.0	•••	••	PC/PC
	tesa® LTR 58488	200	Black	Low-temperature reactive	>75	>7.5	n.a.	>4.0	•••	••	PC/PC
	tesa® LTR 58489	300	Black	Low-temperature reactive	>75	>7.5	n.a.	>4.0	•••	••	PC/PC
tesa® LTR 872x	tesa® LTR 8722	50	Translucent	Low-temperature reactive	>75	>4.5	n.a.	>4.0	•••	••	PC/PC

* Assessment is done only in relation to other products of this assortment. •••• Superior ••• Very good •• Good • Low

ELECTRICALLY CONDUCTIVE SOLUTIONS

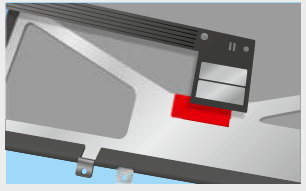


Double-sided ECT – For Applications Requiring Grounding

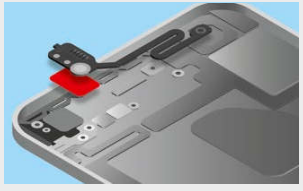
By offering a broad assortment of filled acrylic adhesive systems with a balance between electrical conductivity and adhesive properties we are able to provide the best solution for your requirements. Simply decide what is most important for your application: bonding performance, conductivity, or both balanced. Our double-sided tapes are available with two different backings. The woven backing offers a higher tear resistance, very good dimensional stability, and better reworkability, while the non-woven backing provides faster wetting, excellent conformability, and very good die-cuttability.

Typical applications of our double-sided ECT assortment

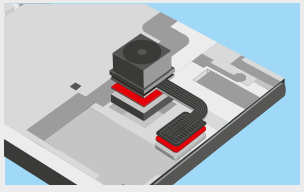
Mounting applications that require electrical conductivity to ground certain components within a mobile device.



FPC grounding



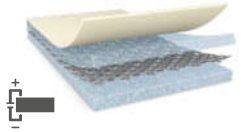
FPC on SUS



Component grounding

tesa® ECT 6025x/6026x

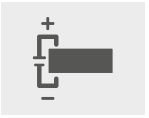
These series provide a balanced performance of conductivity and bonding performance. Thanks to the various backings, the performance profile can be optimally adapted to individual applications.



Balanced properties

tesa® ECT 6037x

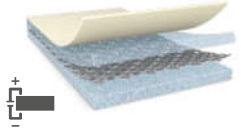
The tesa® ECT 6037x series provides the highest conductivity in our DSECT assortment. The contact resistance, even in harsh environmental conditions, is extremely low.



Best conductivity

tesa® ECT 6038x

tesa® ECT 6038x has the best bonding performance in this assortment, offers very high peel adhesion values, and is resistant to repulsive forces.



Best bonding performance

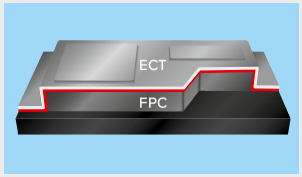
Anti-repulsion

Single-sided ECT – For Covering and Shielding Applications

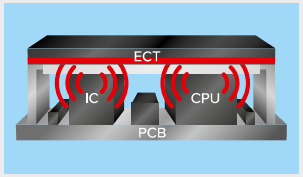
Covering and shielding applications are broad and have different requirements for **conductivity, adhesion, and design**. Our single-sided ECT assortment meets the latest requirements for shielding and appearance.

Typical applications of our single-sided ECT assortment

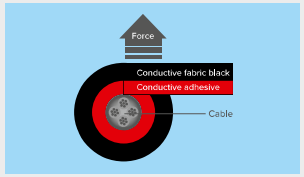
Covering and shielding applications requiring good bonding and anti-repulsion properties as well as high EMI shielding. We provide special solutions for applications with a demand for a attractive, modern appearance.



FPC covering



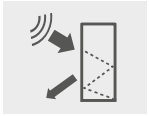
Shielding can



Wire wrapping

tesa® ECT 6023x

The matte black design of our tesa® SSECT 6023x series meets the latest requirements for a modern, high-quality appearance. It is available with two different backings (fabric and copper) to even better meet individual needs on bonding, shielding, and appearance.

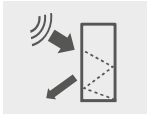


EMI shielding

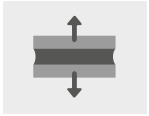
Modern appearance

tesa® ECT 6053x

This series provides the best bonding and anti-repulsion performance in our ECT assortment, while the copper backing ensures high EMI shielding and heat spreading.



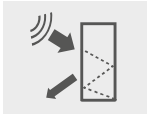
EMI shielding



Best bonding performance

tesa® ECT 6031x

This series has been specially developed for applications which may only be exposed to low pressure. Even then this tape offers excellent conductivity, shielding, and adhesion.



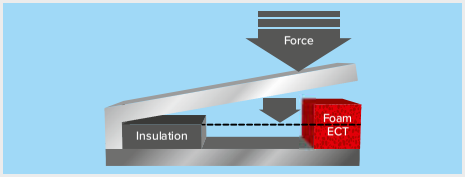
EMI shielding

Low bonding pressure

Single-sided Foam ECT – For Conductive Gap-Filling

Our single-sided electrically conductive foam tapes offer **shielding, grounding, and gap-filling**. They will provide either outstanding **conformability and recovery properties** or a very high **abrasion resistance** depending on the chosen foam material. All series in this assortment have very good **shock-absorbing and cushioning properties**.

Typical applications of our single-sided Foam ECT assortment

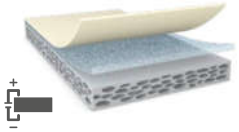


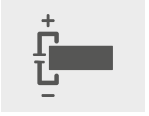
General gap-filling application under compression

Applications which require single-sided conductive gap-filling solutions with the demand for a certain compressibility and/or abrasion resistance.

tesa® ECT 6021x

tesa® SFECT 6021x offers the best conductivity and shielding performance in our electrically conductive foam tape assortment. The soft sponge foam backing is highly compressible, with excellent recovery properties.

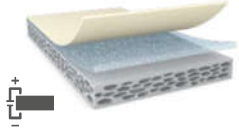




Best conductivity

tesa® ECT 6068x

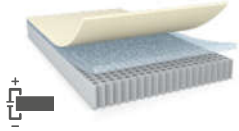
The ultra-soft foam backing of this series further improves the compressibility and the recovery properties at very low forces, while it still has high EMI shielding.



Best compressibility

tesa® ECT 6024x

The highly stable gasket foam which is used in this series is highly suitable for applications with fixed gaps that need normal compression forces. It is very resistant to abrasion from die-cutting and lamination processes.



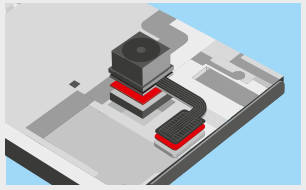
Abrasion resistance

EC HAF – For Applications with Extraordinary Requirements

Our innovative solution for applications requiring **extreme bonding performance** and **outstanding conductivity**. It combines the best features of our Heat-Activated Films (HAF) and electrically conductive PSAs (ECT). tesa® EC HAF is not tacky at room temperature and must be activated by heat and pressure starting at temperatures above 120°C.

Typical applications of our EC HAF assortment

Applications that require structural bonding performance and reliable electrical conductivity. tesa® EC HAF is the right solution for applications needing superior anti-repulsion and grounding properties even under harsh conditions.



Camera and FPC mounting

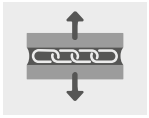
Antenna mounting

Sensor mounting

tesa® EC HAF 5845x/5842x

Our EC HAF series combine electrical conductivity and outstanding structural bonding performance. Additionally, they are highly resistant to repulsive forces and harsh environmental conditions.

While the 5845x series is isotropically xyz-axis electrically conductive, the anisotropic version 5842x is conductive in the z-direction only.



Structural bonding

Temperature and humidity resistance

Anti-repulsion

Can't Find the Right Solution?

We have more options available in our portfolio and by partnering with you we can create unique and specialized products that meet your individual demands.

Simply write to us or contact your local representative.

electronics@tesa.com

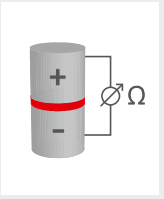
Performance Test Methods

Bonding strength

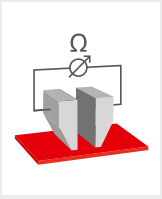
Peel adhesion

As bonding strength is a very important parameter for any application, we have developed various methods to measure the adhesive strengths of our tapes. The most important method to measure the bonding properties is the peel adhesion test. We run this test on different substrates like steel or PE as well as customer substrates.

Conductivity



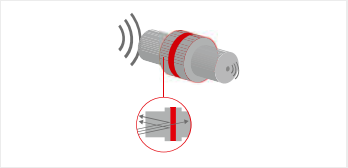
Contact resistance



Surface resistance

As conductivity is a very important parameter for grounding and shielding applications, we have developed various methods to measure the performance of our tapes. The most important method to measure the electrical properties for grounding and shielding applications is the contact resistance test, which determines the electrical resistance in the z-direction through the tape. The surface resistance test determines the electrical resistance in xy-direction along the tape die-cut. We run these tests on conductive substrates in various ways.

Shielding effectiveness



EMI shielding

Electromagnetic fields from electronic components can interfere and disturb other components. Therefore tapes with shielding properties are applied to protect sensitive electronics or to prevent leakage of electromagnetic fields. The shielding effectiveness is defined by the power level measured when the shielding material is present in ratio to when the material is not present. The higher the power level, the better the shielding effectiveness in the measured frequency range is.

ASSORTMENT OVERVIEW

Electrically Conductive Solutions

Series	Product	Thickness [µm]	Color	Type	Backing	Peel adhesion [N/cm; initial/ultimate] SUS	Contact resistance [mΩ.inch²]	Surface resistance [mΩ.sq]	Shielding effectiveness [dB]	Product description*
tesa® ECT 6025x	tesa® ECT 60251	55	Gray	d/s Tape	Woven	4.6/0.5	0.05	0.2	>50	Balanced conductivity and bonding
	tesa® ECT 60252	55	Gray	d/s Tape	Woven	5.5/8.5	0.05	0.2	>50	Balanced conductivity and bonding
	tesa® ECT 60253	70	Gray	d/s Tape	Woven	4.8/9.7	0.05	0.2	>50	Balanced conductivity and bonding
	tesa® ECT 60254	100	Gray	d/s Tape	Woven	6.6/10.4	0.05	0.2	>50	Balanced conductivity and bonding
	tesa® ECT 60255	150	Gray	d/s Tape	Woven	4.5/10.5	0.05	0.2	>50	Balanced conductivity and bonding
	tesa® ECT 60256	200	Gray	d/s Tape	Woven	4.6/10.6	0.05	0.2	>50	Balanced conductivity and bonding
	tesa® ECT 60257	250	Gray	d/s Tape	Woven	4.8/10.8	0.05	0.2	>50	Balanced conductivity and bonding
tesa® ECT 6026x	tesa® ECT 60264	17	Gray	d/s Tape	Non-woven	3.5/4.5	0.02	0.2	>50	Balanced conductivity and bonding
	tesa® ECT 60261	25	Gray	d/s Tape	Non-woven	4.0/5.6	0.02	0.2	>50	Balanced conductivity and bonding
	tesa® ECT 60260	35	Gray	d/s Tape	Non-woven	4.0/4.2	0.02	0.2	>50	Balanced conductivity and bonding
	tesa® ECT 60262	50	Gray	d/s Tape	Non-woven	5.4/8.3	0.02	0.2	>50	Balanced conductivity and bonding
tesa® ECT 6037x	tesa® ECT 60371	30	Black	d/s Tape	Non-woven	3.5/5.1	0.01	0.1	>60	Best conductivity
	tesa® ECT 60372	50	Black	d/s Tape	Non-woven	4.3/5.6	0.01	0.1	>60	Best conductivity
	tesa® ECT 60374	100	Black	d/s Tape	Woven	5.7/ 8.5	0.01	0.1	>60	Best conductivity
tesa® ECT 6038x	tesa® ECT 60381	50	Gray	d/s Tape	Woven	8.0/10.0	0.06	0.3	>50	Best bonding
	tesa® ECT 60384	100	Gray	d/s Tape	Woven	8.0/10.0	0.06	0.3	>50	Best bonding
	tesa® ECT 60382	50	Gray	d/s Tape	Non-woven	8.0/10.0	0.06	0.3	>50	Best bonding
	tesa® ECT 60385	100	Gray	d/s Tape	Non-woven	8.0/10.0	0.06	0.3	>50	Best bonding
tesa® ECT 6023x	tesa® ECT 60231	25	Matte black	s/s Tape	Cond. fabric	3.0/4.1	0.05	0.2	>50	Modern, matte black design
	tesa® ECT 60232	35	Matte black	s/s Tape	Cond. fabric	3.5/4.5	0.05	0.2	>50	Modern, matte black design
	tesa® ECT 60234	55	Matte black	s/s Tape	Cond. fabric	4.5/6.5	0.05	0.2	>50	Modern, matte black design
	tesa® ECT 60238	45	Matte black	s/s Tape	Copper	5.5/7.0	0.05	0.2	>70	Modern, matte black design
tesa® ECT 6053x	tesa® ECT 60537	30	Copper	s/s Tape	Copper	6.3/7.5	0.05	0.2	>70	High bonding
	tesa® ECT 60538	50	Copper	s/s Tape	Copper	6.4/7.7	0.03	0.1	>70	High bonding
tesa® ECT 6031x	tesa® ECT 60313	30	Copper	s/s Tape	Copper	4.0/5.0	0.03	0.1	>70	Low-pressure activation
	tesa® ECT 60315	50	Copper	s/s Tape	Copper	4.0/5.0	0.03	0.1	>70	Low-pressure activation
tesa® ECT 6021x	tesa® ECT 60213	200	Gray	s/s Foam Tape	Soft Foam	4.0/7.1	0.03	0.2	>70	Best conductivity
	tesa® ECT 60214	300	Gray	s/s Foam Tape	Soft Foam	4.8/8.3	0.03	0.2	>70	Best conductivity
	tesa® ECT 60217	1,500	Gray	s/s Foam Tape	Soft Foam	5.0/8.5	0.03	0.2	>70	Best conductivity
	tesa® ECT 60218	2,000	Gray	s/s Foam Tape	Soft Foam	5.0/8.5	0.03	0.2	>70	Best conductivity
tesa® ECT 6068x	tesa® ECT 60685	500	Gray	s/s Foam Tape	Ultra-soft Foam	6.0/8.0	0.03	0.2	>60	Best compressibility
	tesa® ECT 60687	700	Gray	s/s Foam Tape	Ultra-soft Foam	6.0/8.0	0.03	0.2	>60	Best compressibility
	tesa® ECT 60688	1,000	Gray	s/s Foam Tape	Ultra-soft Foam	6.0/8.0	0.03	0.2	>60	Best compressibility
tesa® ECT 6024x	tesa® ECT 60246	300	Gray	s/s Foam Tape	Gasket Foam	4.1/5.3	0.03	0.2	>70	Best abrasion resistance
	tesa® ECT 60248	500	Gray	s/s Foam Tape	Gasket Foam	4.8/6.3	0.03	0.2	>70	Best abrasion resistance
	tesa® ECT 60249	700	Gray	s/s Foam Tape	Gasket Foam	4.8/7.5	0.03	0.2	>70	Best abrasion resistance

Series	Product	Thickness [um]	Color	Type	Backing	Dynamic shear [N]	Contact resistance [mΩ.inch²]	Surface resistance [mΩ.sq]	Shielding effectiveness [dB]	Product description
tesa® EC HAF 5845x	tesa® EC HAF 5845x	30	Black	Structural adhesive	-	>5	0.05	0.2	>30	xyz-conductive
	tesa® EC HAF 5845x	50	Black	Structural adhesive	-	>7	0.05	0.2	>30	xyz-conductive
tesa® EC HAF 5842x	tesa® EC HAF 5842x	30	Gray	Structural adhesive	-	>5	0.05	-	>30	z-conductive
	tesa® EC HAF 5842x	50	Gray	Structural adhesive	-	>7	0.05	-	>30	z-conductive

* Description is done in relation to other products of the same type.

DISPLAY LAMINATION TAPES

Optically Clear Adhesive Tapes – For Display Lamination

Displays are integrated into more devices than ever before. As new markets grow, new materials and application demands create new challenges for optically clear adhesives. Our assortment reflects this diversity by offering materials with special features to support this dynamic and diverse market. We also know that constant development is needed, and we are working with top industry suppliers to shape and support the next generation of displays.

Our comprehensive assortment is designed to provide a solution for every display application. All our materials are produced in a **clean room** and fulfill **optically clear** requirements, while also being **environmentally stable** and **compatible with other display layers**.

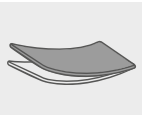
Product development pipeline

In addition to our active assortment, we are developing new materials to support handheld devices with **foldable and curved-edge displays**, as well as backside **cushioning tape**. Furthermore, we are developing new **OCA tapes for automotive**, and other **moisture-control tapes for OLED and organic solar cell** laminations.

Contact us to learn about our product development pipeline:
electronics@tesa.com

tesa® OCA 6940x

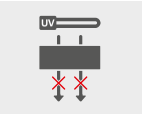
6940x is our versatile flagship series which is a pressure-sensitive OCA tape that offers a well-balanced profile. It is easy to laminate and convert, and is highly compatible with touch sensor films, polarizers, and cover glass. Best results are achieved when used in rigid/flex or flex/flex applications.



Lamination of films

tesa® OCA 6920x

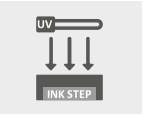
6920x is a pressure-sensitive OCA series which is easy to laminate and convert. It is the best for lamination of films to protect UV-sensitive materials, as it offers UV-blocking for wavelengths below 380 nm. Best results are achieved when used in rigid/flex or flex/flex applications.



UV-blocking

tesa® OCA 6960x

6960x is a UV-curable OCA tape that is best for cover glass lamination. It offers superb gap-filling properties to ensure complete ink coverage, and has excellent reliability performance after curing. Suitable for rigid/rigid or rigid/flex applications.



UV-curable

tesa® OCA 6980x

6980x is a UV-curable OCA tape that is outgassing resistant against difficult plastics such as PC and PMMA. It has excellent gap-filling properties, and best-in-class bubble resistance after curing. Suitable for rigid/rigid or rigid/flex applications.

Outgassing resistance

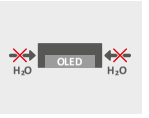
tesa® OCA 6156x

6156x is a pressure-sensitive OCA tape designed for moisture-sensitive films, displays, or touch panels. It has a low WVTR, low and stable dielectric constant, and provides corrosion resistance. It has excellent compatibility with silver nanowires and other metallic paste materials. Best results are achieved with flex/flex laminations.

Anti-corrosion

tesa® OCA 6150x

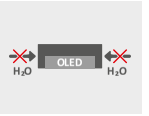
6150x is a UV-curable OCA designed for moisture-sensitive films, displays, or touch panels. It has a lag time of 1,000 hours (6.5 mm width test at 60°C/95% RH), low WVTR, high adhesion, and balanced gap-filling. Best results are achieved with flex/flex laminations.



Moisture-blocking

tesa® Barrier Tape 6153x

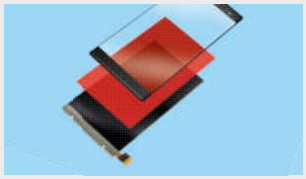
6153x is a pressure-sensitive adhesive that offers supreme moisture-blocking to protect sensitive materials. It is beige in color, and should be considered for backside encapsulation of OLED, and other nontransparent applications such as protecting organic solar cell materials.



Moisture-blocking

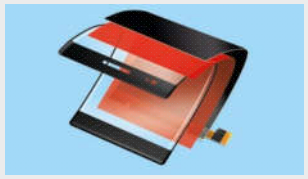
Typical applications of our display lamination tapes

When laminating a display, there are certain basic requirements for an OCA: optical clarity, high transmission, low haze, high bonding strength, and easy lamination. In addition, each special application has its own specific requirements.



Cover lens to touch panel
When laminating these two layers, it is always necessary to use adhesive tapes that are able to cover ink and are compatible with ITO. Whenever curved glass is used instead of flat glass the tape should also have very good relaxation properties. For plastic substrates good outgassing resistance is indispensable.

Touch panel to display panel
The lamination of these two layers can be found in LCD as well as in OLED displays. While an easy lamination process and high environmental stability is key for both types of display, OLED displays additionally require high resistance to repulsion forces and better relaxation properties, because of their curved design.



Flexible layers
Laminating flexible layers within a foldable or rollable display is a very demanding application. Currently different substrates are used in flexible displays. The lamination of films requires high peel adhesion and very good bending properties. For some special substrates like silver nanowire, an OCA tape with good compatibility is required.

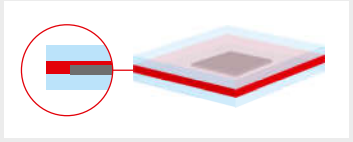
Performance Test Methods

Bonding strength

Peel adhesion

As bonding strength is a very important parameter for any application, we have developed various methods to measure the adhesive strengths of our tapes. The most common method to measure the bonding properties is the peel adhesion test. We run this test on different substrates like glass or common plastics found in the display industry. We use a standard peel speed of 300 mm/min.

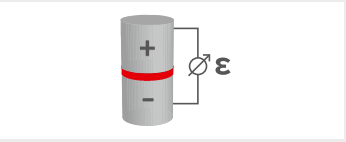
Ink coverage



Cross test

In order to test the ability to cover ink, we have developed the cross test. An ink cross is printed on glass, and shows if the adhesive covers the ink fully or if air entrapments appear as a result of insufficient ink coverage. This determines the gap-filling properties of our OCA tapes. As we use glass/glass, our ink coverage values are lower than if we used flexible substrates such as flexible films.

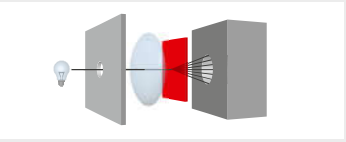
Dielectric constant



Dielectric constant

Determining the proper dielectric constant is critical for the touch sensitivity of every display. Certain dielectric constant values of the adhesive in the desired frequency range ensure the touch functions as intended within the design. The dielectric constant of tape is determined by means of the capacitance method.

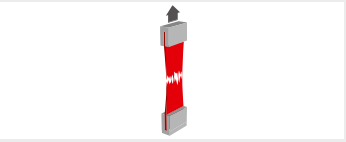
Transmittance and haze



Transmittance and haze

The transmittance test is a measure of light through the optical material, displayed as a percentage, and the data are corrected for substrate reflection. The transmittance can also be measured in the UV-VIS spectrum. The haze value, which is the ratio of the diffuse-transmitted light to the transmitted light, is obtained in the same measurement.

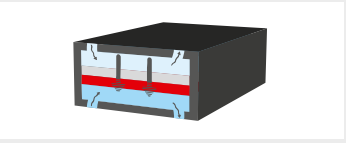
Young‘s modulus



Young's modulus

A critical mechanical property of materials can be described by the Young’s modulus. This value is measured in a uniaxial tension test, where a strip of tape is pulled apart. The faster the stress rises versus the strain in the linear elastic region of the material, the higher the Young’s modulus. In this test, we can also determine the yield stress, ultimate stress, and elongation at break.

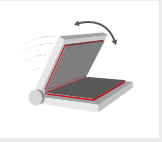
Barrier performance



WVTR method

The water vapor transmission range (WVTR) is measured with a special chamber. The amount of water that can diffuse through a sample per time is measured where the tape is adhered between two chambers with different humidities. For our test, the test condition is 38°C, 90% RH.

Bending properties



Dynamic bending

Static bending

To evaluate the most appropriate solution for foldable device, static and dynamic bending test are designed with customized material layers, and specific bending radii under different environmental test conditions. We have capabilities to perform custom bending tests based on different radii, frequencies, and environmental conditions.

ASSORTMENT OVERVIEW

Optically Clear Adhesive Tapes

Series	Product	Thickness [µm]	Color	Type	Transmission [%]	Haze [%]	Color			Refractive index	Peel adhesion* [N/cm]				Gap-filling* [%]	DK at 100 kHz	Young's modulus* [MP]	Features
							L	a	b		Glass	PET	PC	PMMA				
tesa® OCA 694xx	tesa® OCA 69401	25	Transparent	PSA	>99	<0.5	99.95	0.00	0.02	1.48	5.4	4.1	5.9	5.8	10-15	4.9	0.33	Lamination of films
	tesa® OCA 69402	50	Transparent	PSA	>99	<0.5	99.84	0.00	0.03	1.48	6.3	4.3	6.4	6	10-15	4.9	0.33	Lamination of films
	tesa® OCA 69404	100	Transparent	PSA	>99	<0.5	99.70	-0.03	0.08	1.48	6.9	4.8	7	6.2	10-15	4.9	0.33	Lamination of films
	tesa® OCA 69405	125	Transparent	PSA	>99	<0.5	99.60	-0.06	0.13	1.48	7.8	5.4	7.7	6.4	10-15	4.9	0.33	Lamination of films
tesa® OCA 692xx	tesa® OCA 69204	100	Transparent	PSA	>99	<0.5	99.60	-0.16	0.50	1.48	6.9	4.8	7	6.2	10	4.9	0.33	UV-blocking
	tesa® OCA 69206	150	Transparent	PSA	>99	<0.5	99.30	-0.16	0.52	1.48	7.1	5.2	7.2	6.6	10	4.9	0.33	UV-blocking
	tesa® OCA 69208	200	Transparent	PSA	>99	<0.5	99.00	-0.16	0.55	1.48	7.4	5.4	7.5	6.9	10	4.9	0.33	UV-blocking
tesa® OCA 696xx	tesa® OCA 69604	100	Transparent	UV-curable	>99	<0.5	99.50	-0.04	0.04	1.48	12.2	9.4	15.1	13.2	30	4.5	0.29	High gap-filling
	tesa® OCA 69605	125	Transparent	UV-curable	>99	<0.5	99.40	-0.04	0.05	1.48	13.8	9.9	15.9	14.1	30	4.5	0.29	High gap-filling
	tesa® OCA 69606	150	Transparent	UV-curable	>99	<0.5	99.30	-0.05	0.06	1.48	14.4	10.4	17.1	15.5	30	4.5	0.29	High gap-filling
	tesa® OCA 69607	175	Transparent	UV-curable	>99	<0.5	99.00	-0.06	0.08	1.48	16.5	10.9	18.6	17.9	30	4.5	0.29	High gap-filling
	tesa® OCA 69608	200	Transparent	UV-curable	>99	<0.5	98.80	-0.07	0.09	1.48	18.0	11.5	19.2	18.8	30	4.5	0.29	High gap-filling
tesa® OCA 698xx	tesa® OCA 69802	50	Transparent	UV-curable	>99	<0.5	99.90	-0.05	0.06	1.48	9.0	6.1	9.8	9.5	30	4.7	1.0	Outgassing resistant
	tesa® OCA 69804	100	Transparent	UV-curable	>99	<0.5	99.60	-0.06	0.12	1.48	11.7	7.9	13.2	12.5	30	4.7	1.0	Outgassing resistant
	tesa® OCA 69806	150	Transparent	UV-curable	>99	<0.5	99.40	-0.08	0.18	1.48	13.3	8.4	15.3	14.4	30	4.7	1.0	Outgassing resistant
	tesa® OCA 69808	200	Transparent	UV-curable	>99	<0.5	99.10	-0.11	0.21	1.48	16.4	9.3	16.5	17.1	30	4.7	1.0	Outgassing resistant
tesa® OCA 6156x	tesa® OCA 61562	25	Transparent	PSA	>99	<0.5	99.80	-0.04	0.12	1.52	4.5	2.9	4.1	4.4	5-10	2.56	2.00	Low DK, low WVTR
	tesa® OCA 61563	50	Transparent	PSA	>99	<0.5	99.80	-0.05	0.15	1.52	5	3.3	4.7	4.8	5-10	2.56	2.00	Low DK, low WVTR
	tesa® OCA 61564	75	Transparent	PSA	>99	<0.5	99.70	-0.07	0.18	1.52	5.2	3.5	5	5.4	5-10	2.56	2.00	Low DK, low WVTR
tesa® OCA 6150x	tesa® OCA 61504	15	Transparent	UV-curable	>99	<0.5	99.00	-0.25	0.68	1.52	2.7	2.3	2.5	Upon request	20	2.5	3.20	Moisture-blocking
	tesa® OCA 61500	25	Transparent	UV-curable	>99	<0.5	100.00	-0.20	0.54	1.52	4.1	3.3	3.7	Upon request	20	2.5	3.20	Moisture-blocking
	tesa® OCA 61501	50	Transparent	UV-curable	>99	<0.5	100.00	-0.14	0.31	1.52	5.5	4.7	5.1	Upon request	20	2.5	3.20	Moisture-blocking
tesa® Barrier Tape 6153x	tesa® Barrier Tape 61531	25	Beige	PSA	n.a.	n.a.	n.a.	n.a.	n.a.	1.52	4.5	3.9	4.6	Upon request	5-10	2.92	2.20	Moisture-blocking
	tesa® Barrier Tape 61533	50	Beige	PSA	n.a.	n.a.	n.a.	n.a.	n.a.	1.52	6.5	6.0	6.8	Upon request	5-10	2.92	2.20	Moisture-blocking

* For UV-curable tape, the data after UV-curing.

YOUR LOCAL CONTACTS

Germany

Hugo-Kirchberg-Straße 1
22848 Norderstedt | Germany

+49 40 888 99 0
electronics@tesa.com

China

No. 1, 2500 Lane Xiu Pu Road
201315 Pudong | Shanghai, China

+86 21 6818 3110
electronics@tesa.com

Korea

City Air Tower, Office 1805
36 Teheran-ro 87-gil, Gangnam-gu
Seoul 06164 | Korea

+82 2 34300 100
electronics@tesa.com

Japan

1-27-6 Shirokane, Shirokane Takanawa
Station Bldg 8F Minato-ku
708-0072 | Tokyo, Japan

+81 3 6833 2300
electronics@tesa.com

South East Asia

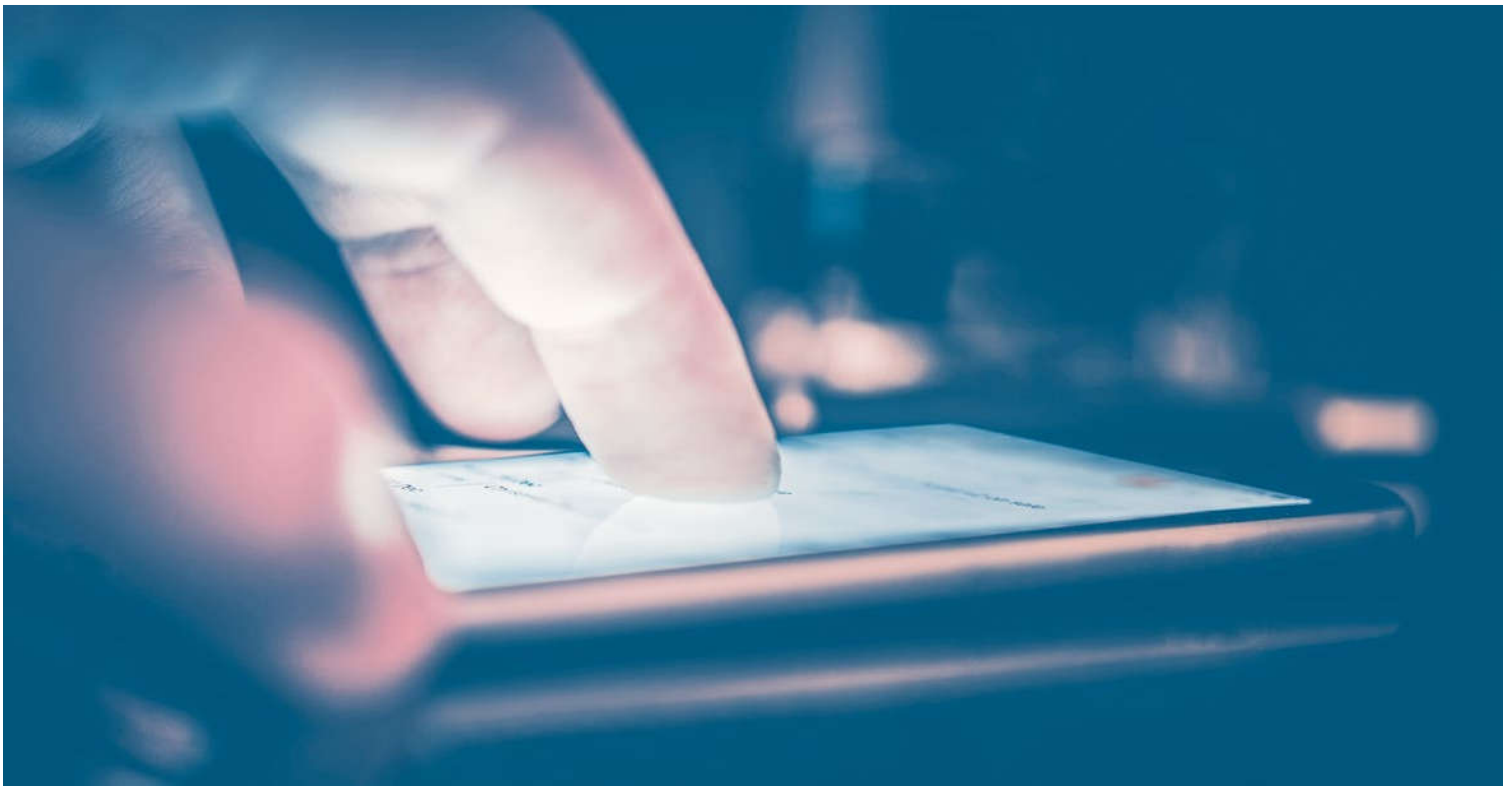
9 North Buona Vista Drive
04-01 The Metropolis Tower 1
138588 | Singapore

+65 6697 9888
electronics@tesa.com

USA

111 W Evelyn Ave Suite 215
Sunnyvale, CA 94086 | USA

+1 650 996 8131
electronics@tesa.com



02/2020

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

tesa SE
Phone: +49 40 88899 0
tesa.com/en/industry/electronics

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