



Innovation meets sustainability for the future of your Electronics



For a more sustainable future

The new era of sustainability in Electronics



The rapidly evolving world of Electronics has ushered in a new era that places a premium on sustainability. As the industry continues to grow at an unprecedented rate, so does the demand for solutions that minimise environmental impact. In the midst of this paradigm shift, businesses need to align their manufacturing and production processes with the principles of sustainability, not just for the sake of the environment but also to fulfil the expectations of increasingly conscious consumers and stakeholders.

<p>53.6 million tonnes</p> <p>E-waste is the fastest-growing solid waste stream in the world. In 2019, an estimated 53.6 million tonnes of e-waste were generated globally.¹</p> <p>Source: World Health Organization</p> 	<p>16 years to double</p> <p>Global e-waste (discarded products with a battery or electrical plug) will reach 74 Mt by 2030 — almost a doubling of e-waste tonnage in just 16 years.¹</p> <p>Source: World Health Organization</p> 	<p>50 million tonnes of e-waste</p> <p>The world produces as much as 50 million tonnes of electronic and electrical waste (e-waste) a year, weighing more than all of the commercial airliners ever made.²</p> <p>Source: UN Environment Programme</p>
<p>20% of global e-waste is recycled</p> <p>It's estimated that only 20% of global e-waste is recycled each year.³</p> <p>Source: Greenpeace</p> 	<p>Extending the lifespan of products</p> <p>The Electronics industry is working towards extending the lifespan of products to reduce electronic waste.⁴</p> <p>Source: Financial Times</p> 	
<p>1st ever 'right to repair' law for Electronics</p> <p>New York state passes first-ever 'right to repair' law for Electronics and legislation such as the EU's WEEE directive is driving the Electronics industry towards greater sustainability.³</p> <p>Source: Greenpeace</p> 	<p>57 billion worth of raw materials</p> <p>One year of e-waste, from discarded devices, contains \$57bn worth of raw materials - which could be re-used or recycled if companies improve product design.⁴</p> <p>Source: Financial Times</p> 	

“ Taking on more responsibility for the world around us is becoming increasingly important – for us as a company, for our employees and for our business partners and customers.”

¹WHO. "Electronic waste (e-waste)." Retrieved from [https://www.who.int/news-room/fact-sheets/detail/electronic-waste-\(e-waste\)](https://www.who.int/news-room/fact-sheets/detail/electronic-waste-(e-waste)).
²UN Environment Programme. "UN report: Time to seize opportunity, tackle challenge of e-waste." Retrieved from <https://www.unep.org/news-and-stories/press-release/un-report-time-seize-opportunity-tackle-challenge-e-waste>.
³Greenpeace. "Guide to greener Electronics". Retrieved from <https://www.greenpeace.org/static/planet4-netherlands-stateless/2018/06/Guide-to-greener-electronics-2017.pdf>
⁴Financial Times. "Extend phone lifetimes to cut environmental threat". Retrieved from <https://www.ft.com/content/87c118a5-8e5d-4d47-a4fa-6a9b72788139>

tesa: Your partner in achieving sustainability goals

We recognise that achieving your sustainability goals requires more than just intent; it requires partnership, innovation, and, most importantly, it requires effective solutions. This is where we come in.

With our technical expertise and commitment to environmental responsibility, we are uniquely positioned to assist businesses in the Electronics industry in their journey towards becoming more sustainable. Our purpose-driven approach empowers us to deliver adhesive tape solutions that are both superior in performance and environmentally friendly.

tesa's path to sustainability: Enabling a more sustainable Electronics industry

At tesa, our commitment to driving innovation in the Electronics industry has taken on an additional dimension of sustainability. We firmly believe that technological advancement and environmental responsibility can coexist. This belief is reflected in our product development strategy, which incorporates several environmentally friendly practices. For example, our research and development teams are constantly exploring the use of renewable, bio-based materials in our products, helping to reduce dependency on non-renewable resources. Also, we promote the concept of a circular economy by encouraging the design of products that are durable, easy to repair and recycle. These initiatives underscore our dedication to sustainability in the Electronics industry.



230,000 kWh per year are generated by the photovoltaic system at our headquarters. This is enough to operate the ventilation system at our technology centre.



At 1.5°C, tesa firmly supports the United Nations' goal of limiting the rise in the average global temperature.



Since 2014, 1.5 billion smartphones have been equipped with innovative adhesive technology developed by tesa that makes it possible to replace the battery.



70% of the materials for our products and packaging will be recycled or bio-based by 2030.



54% of our direct purchasing volume is covered by EcoVadis based on self-reporting by our suppliers.



Unveiling tesa products: The intersection of innovation and sustainability

The Electronics industry is shifting towards sustainability, and tesa is playing its part in driving this change with innovative adhesive that meet performance requirements while aligning with sustainability goals. Discover how tesa's exceptional sustainability solutions can help you reach your sustainability goals.

Sustainability enabling products: Paving the way for responsible business practices

At tesa, we offer a variety of cutting-edge solutions, all while actively working to expand our portfolio with more sustainable products. This aligns with our dedication to integrating innovation and sustainability seamlessly.

tesa® bio-based film tapes is a new product with 75% bio-based carbon content adhesive and 100% post-consumer recycled (PCR) PET in backing and liner. It's a sustainable alternative that doesn't compromise quality or performance.

tesa® bio-based electrical conductive tapes is made using bio-based materials. It offers high bonding strength and electrical conductivity. This promotes a shift towards using sustainable raw materials in the Electronics industry, which reduces dependence on non-renewable resources.

tesa® bio-based acrylic foam tapes, a sustainable addition to our lineup designed for demanding electronics applications. This unique tape, with viscoelastic properties, provides high bonding performance, impact resistance, and waterproofing throughout the product's life cycle. It represents our commitment to both performance excellence and environmental sustainability.

tesa Bond & Detach® is an innovative adhesive solution that offers strong component mounting and residue-free removal. It promotes circular economic models by improving the ability to fix and recycle electronic devices, reducing waste.

tesa's adhesive solutions prioritise sustainability and technical excellence. By using these products, businesses become part of a larger vision for a more resilient and responsible future. tesa's innovative and environmentally responsible products are not just an adhesive solution but an integral component of a business's sustainability strategy.



Bio-based film tapes

tesa® 6887x	
Design	
Color	Transparent
Adhesive	Bio-based acrylic (75% bio-based carbon content)
Backing	PCR PET (100% PCR content)
Thickness	5 µm
	30 µm 68873
	50 µm 68875
	80 µm
	100 µm 68877
	125 µm
	140 µm
	150 µm 68878
	160 µm
	200 µm 68879
250 µm	
Product performance	Reference product 68877
	Peel adhesion [N/cm; initial/ultimate] SUS 12.6/12.8
	Push-out [N] 317
	DuPont [J; xy/z] 0.6/0.25

Transparent



tesa's sustainability marker:

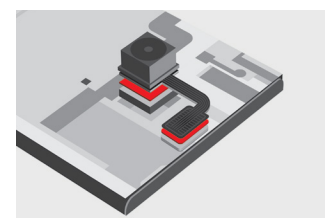
This marker highlights our more sustainable products by fulfilling either of the following criteria:

- Use of bio-based materials:** In this case, the marker is reserved for products that contain at least 50% bio-based material in one component and 30% in the entire product. In addition, all fiber-based material must be from certified sources such as FSC® (C148769).
- Use of recycled material:** To qualify for the new marker, at least one component of the product – the backing, the adhesive, or the liner – must be made of at least 50% recycled material, and the total share in the product must be at least 30%.
- Use of mass balanced material:** If content of a (bio) mass balance material is above 50% referring to a single product component (backing, adhesive and liner) and minimum 30% share in total product, then it qualifies for the marker. But all (bio) mass balanced materials should be certified by ISCC Plus or equivalent certification scheme.
- Recyclability:** To be eligible for the marker, products must be certified as recycling-friendly or recyclable according to certifications like INGEDE Method 12 or PTS-RH 021:2012.

For online version, please visit:

<https://www.tesa.com/en/about-tesa/sustainability/our-attitude-and-our-agenda/use-of-recycled-and-bio-based-materials/product-sustainability>

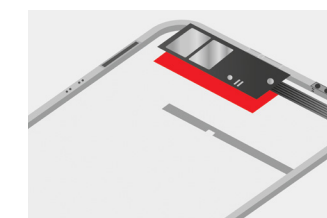
Typical applications



Component mounting



Cushioning



FPC Fixation

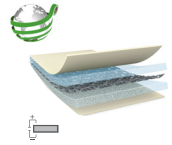


Cover glass frame mounting

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

Bio-based electrical conductive tapes

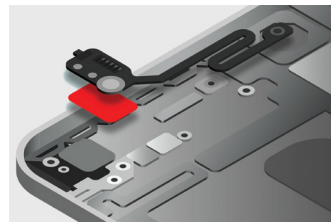
tesa® 6066x

Design	
Color	Gray
Adhesive	Conductive 75% bio-based carbon content acrylic adhesive
Backing	100% post-consumer recycled PET content in backing & liner
Special features	Balanced properties
Thickness	<ul style="list-style-type: none"> 17 µm 25 µm 30 µm 35 µm 50 µm ● 60665 55 µm 70 µm 100 µm ● 60667 150 µm 200 µm
Reference product	● 60667
Product performance	<ul style="list-style-type: none"> Peel adhesion [N/cm; initial/ultimate] Upon request Dynamic shear [N] Upon request Contact resistance [mΩ.inch²] 0.05 Surface resistance [mΩ.sq] 0.2 Shielding effectiveness [-dB] Upon request

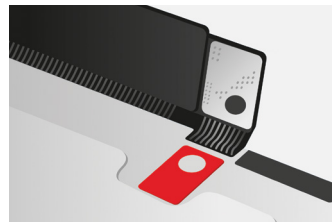
● Gray



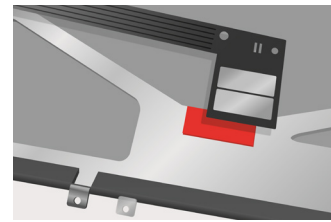
Typical applications



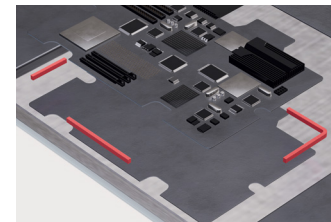
Antenna mounting



Display grounding



FPC grounding

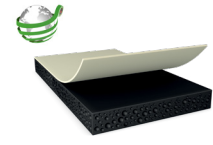
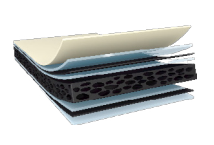


MLB grounding

tesa® foam tapes

tesa® 760xx

tesa® 66425

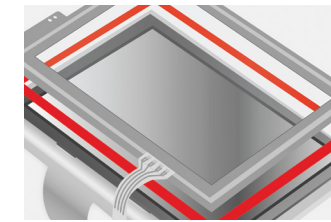
Design		
Color	Black	Black
Adhesive	Tackified acrylic (66% bio-based carbon content)	Acrylic
Backing	-	PE foam (with PET reinforcement)
Special features	Balanced performance, high bio content	Cuttable for rework
Thickness	<ul style="list-style-type: none"> 50 µm 100 µm ● 76010 150 µm ● 76015 200 µm ● 76020 250 µm 280 µm 300 µm 350 µm 400 µm 250 µm 	<ul style="list-style-type: none"> ● 66425
Reference product	● 76020	● 66425
Product performance	<ul style="list-style-type: none"> Peel adhesion [N/cm; initial/ultimate] SUS 11.0/12.0 Push-out [N] 120 DuPont [J; xy/z] 1.0/0.8 Removability*/reworability* ●● 	<ul style="list-style-type: none"> Upon request 210 0.49/0.47 ●●●●

* Assessment is done in relation to other products in this assortment

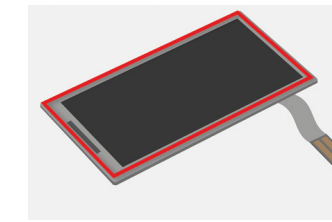
● Black



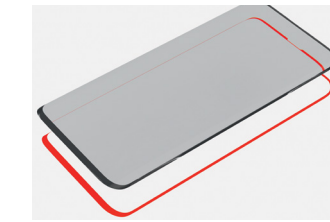
Typical applications



Antenna mounting



Display module mounting



Cover glass frame mounting



Touch panel mounting

Bond & Detach®

	tesa® 704xx /706xx	tesa® 703xx	tesa® 672xx	tesa® 770xx	tesa® 648xx	tesa® 705xx
Design						
Color	White, black	Transparent	White	Translucent white	White	White
Adhesive	46% bio-based adhesive component	Specialty	Specialty	46% bio-based adhesive component	Specialty	Specialty
Backing	-	-	Stretchable PU	Stretchable specialty	Stretchable specialty	-
Special features	Bonding strength, easy activation	Bonding strength, easy activation	High impact resistance	Impact resistance, tear resistance	Impact resistance, tear resistance	Anti-repulsion, temp. resistance
Thickness						
80 µm			○ 67208**			
100 µm	○ 70410 ● 70610		○ 67210**	○ 77010	○ 64810*	
150 µm	○ 70415 ● 70615	○ 70315	○ 67215	○ 77015	○ 64815 ○ 64816	
175 µm						
200 µm	○ 70420 ● 70620				○ 64820	
250 µm	○ 70425 ● 70625				○ 64825	○ 70525
300 µm	○ 70430				○ 64830	
350 µm	● 70635					
400 µm	○ 70440 ● 70640					
500 µm	● 70650	○ 70350				○ 70550
650 µm	○ 70465 ● 70665					
800 µm	○ 70480 ● 70680					
1,000 µm	○ 70499					
Product performance						
Reference product	○ 70415 ● 70615	○ 70315	○ 67215	○ 77015	○ 64815	○ 70525*
Peel adhesion SUS [N/cm; initial/ultimate] PE	13.0/13.0 7.0/7.0	13.0/13.0 7.0/7.0	9.0/9.0 6.0/6.0	10.0/10.0 7.0/8.0	11.0/11.0 8.0/8.0	13.0/13.0 9.0/9.0
DuPont [J; xy/z]	0.7/0.3	0.7/0.3	1.1/0.8	1.1/0.8	1.0/0.7	1.0/0.7
Tumbler [cycles]	Upon request	Upon request	>500	500	500	Upon request
Removing force [N/cm]	4.0	4.0	5.0	4.0	4.0	6.0

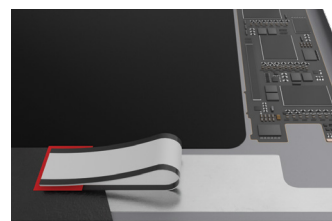
* Deviating thickness ** Upon request

○ Transparent ○ Translucent ○ White ● Black

Typical applications



Battery mounting in mobile devices



Temporary fixation of components



Mounting of valuable components



Removable mounting of devices or accessories

Global presence



Your local contacts

Singapore — Regional Headquarters

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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.



Certification

Our company is focused on international quality, environmental, and occupational safety standards.

Please find more information regarding our certifications at:
www.tesa.com/certifications

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tesa.com/company/locations