

# BONDING SOLUTIONS

tesa Double-Sided Tapes

## **TAPE CONSTRUCTION**

### Features of Our Double-Sided Tapes

## **Construction of Our Double-Sided Tapes**



#### Transfer Tapes

Transfer tapes differ from other double-sided tapes in that they have no backing. They are transparent and extremely conformable, however cannot be repositioned once in place.



#### Tissue Tapes

Double-sided tissue tapes are hand-tearable, making them ideal for manual applications, and their low total thickness means they can conform to slightly irregular surfaces.



#### Cloth Tapes

Due to their high strength and high tack adhesive system, double-sided cloth tapes allow objects to be quickly and easily bonded to a wide range of differing surfaces.



#### Filmic Tapes

Double-sided filmic tapes are relatively thin, dimensionally stable and are ideal for bonding to flat, smooth surfaces such as glass, metal and non-embossed plastics.



#### Polyethylene Foam Tapes

Double-sided foam tapes can be used to compensate for gaps, bond different substrates, and dampen unwanted noises or vibrations. They also feature shock absorbing properties. They are resistant to UV, moisture and humidity, making them perfect for outdoor use.



#### tesa<sup>®</sup> ACX<sup>plus</sup> Acrylic Core Tapes

The strongest adhesive tape class on the market. Due to its viscoelastic properties, stresses can be dissipated to ensure a secure and powerful long term bond.



tesa® 4965 mounting to glass



tesa<sup>®</sup> 62934 general mounting



tesa® 4974 for permanent carpet laying



## **Our Double-Sided Adhesive Systems**

#### Pure Acrylic - High temperature performance

Pure acrylic adhesive is especially suitable for outdoor applications and applications at elevated temperatures. Good adhesive strength on polar and pretreated non-polar surfaces Resistance against ageing and environmental conditions (e.g. UV and humidity)

#### Modified (Tackified) Acrylic - High initial adhesion power

Modified acrylic is a versatile adhesive with a well-balanced performance on a wide variety of surfaces. Very good adhesive strength on polar surfaces, good on low surface energy (adhesive rejecting) surfaces Resistance against ageing and environmental conditions (e.g. UV and humidity)

#### Synthetic Rubber - Immediate adhesive bonding

Synthetic rubber adhesive is suitable for a variety of surfaces but offers limited ageing and temperature resistance.

- Good shear resistance
- Very good bonding on polar and non-polar surfaces

#### Natural Rubber - Immediate bonding on non-polar surfaces

Natural rubber adhesive has very high tack and is ideal for use on rough surfaces.

- Very good bonding on polar and non-polar surfaces
- Preferred for use in indoor applications

Our double-sided tapes consist of three main components:

#### 1. Backing

The backing is particularly critical when choosing a doublesided tape. Factors such as substrate characteristics and environmental conditions should be taken into account. For critical applications, tesa® ACX<sup>plus</sup> tapes are able to dissipate stresses, thanks to their viscoelastic nature.

#### 2. Adhesive system

The proper choice of the adhesive system depends on how the double-sided tape is to be used: the kinds of surfaces which are to be bonded, how long the bond is required to last, and whether it is an indoor or an outdoor application.

#### 3. Liner

The liner covers the adhesive system and is an important element for the application and removal process.

## **TECHNICAL GUIDE**

## **Double-Sided Tape Specifications**

	TRAN	ISFER	TISSUE			CLOTH			FILMIC					POLYETHYLENE FOAM						TESA <sup>®</sup> ACX <sup>PLUS</sup>	
Product Feature	tesa® 4900	tesa® 4985	tesa® 68614	tesa® 68616	tesa® 60985	tesa® 4934	tesa® 4964	tesa® 4974	tesa® 64620	tesa® 51970	tesa® 4970	tesa® 51966	tesa® 4965	tesa® 62508	tesa® 4952	tesa® 62932	tesa® 62934	tesa® 62936	tesa® 62939	tesa® 7044	tesa® 7048
Backing Material	None	None	Tissue	Tissue	Tissue	Cloth	Cloth	Cloth	PP Film	PP Film	PVC Film	Polyester Film	Polyester Film	PE Foam	PE Foam	PE/EVA Foam	PE Foam	PE Foam	PE Foam	Foamed Acrylic	Foamed Acrylic
Adhesive	Pure Acrylic	Modified Acrylic	Modified Acrylic	Modified Acrylic	Modified Acrylic	Synthetic Rubber	Natural Rubber	Natural Rubber	Synthetic Rubber	Modified Acrylic	Modified Acrylic	Modified Acrylic	Modified Acrylic	Modified Acrylic	Modified Acrylic	Modified Acrylic	Modified Acrylic	Modified Acrylic	Modified Acrylic	Pure Acrylic	Pure Acrylic
Colour	Trans- parent	Trans- parent	Translu- cent	Translu- cent	Translu- cent	White	White	White	White	Trans- parent	White	Trans- parent	Trans- parent	White / Black	White	White / Black	White / Black	White / Black	White	Grey / White	Grey / White
Thickness Without Liner	50 µm	50 µm	100 µm	130 µm	150 μm	220 µm	390 µm	380 µm	185 µm	220 µm	240 µm	195 µm	205 µm	800 µm	1115 µm	500 µm	800 µm	1600 µm	3000 µm	1000 µm	2000 µm
Ultimate Adhesion to Steel (N/cm)	3.8	11.1	10	10.1	7.5	24	7.6	6.1	14.5	13.5	13.6	11	11.8	13.5	8	17	17	19	6	33	38
Temperature Resistance (Short/Long Term)	200°C / 80°C	200°C / 80°C	200°C / 100°C	130°C / 80°C	150°C / 80°C	60°C / 40°C	110°C / 30°C	110°C / 30°C	80°C / 40°C	130°C / 80°C	70°C / 60°C	130°C / 80°C	200°C / 100°C	80°C / 80°C	80°C / 80°C	80°C / 80°C	80°C / 80°C	80°C / 80°C	80°C / 80°C	200°C / 120°C	170°C / 120°C
Outdoor Suitability		••••	•••	•••	•••		••		•	•••	•••	••••	••••	•••	•••	•••	•••	•••	•••	••••	••••
Bond Strength (>24hrs)		•••			•••	••••	••				••••		••••	•••	••••	•••	•••	•••	••	••••	••••
Initial Tack		••••	•••	•••	••••	••••	••••	•••	••••	•••	•••	•••	•••	•••	••••	••	••	••	•••	••••	•••
Bonding Rough Surfaces	•															•••		•••		••••1	••••1
Bonding Low Surface Energy Sub- strates		•••			•••	••••	•••	•••		•••	••••	•••	••••	•••	•••	•••	•••	•••	•••	••• <sup>1</sup>	••••1
Ageing Resistance		••••	••••	••••	••••		•	•	•	•••	••••	•••	••••	••••	•••	•••	••••	••••	••••	••••	••••
															<sup>1</sup> (With Adhe	sion Promot	er) •••	Very good	••• Goo	d 🔹 Medi	um • Low



tesa® 4900 mounting warning sign



 $\text{tesa}^{\text{\tiny (8)}} \text{ ACX}^{\text{\tiny plus}}$  7048 being applied to fire engine body subframe



tesa® 4952 mounting bathroom mirror to wall



tesa® 4974 laying temporary tradeshow flooring

## **APPLICATION IDEAS**

## **Our Core Double-Sided Assortment**

Product	Application Ideas
tesa® 4900	Transfer tape ideal for light-weight bonding applications such as assembling POS displays, mounting displays and posters and laminating textile swatches.
tesa® 60985	Tissue tape well suited for the lamination of foam and felt materials. Also used for mounting metallic and plastic nameplates and control panels, particularly where hard to adhere to materials are involved.
tesa® 4934	Cloth tape for the light-duty mounting of rough fibrous surfaces such as carpet, fabric and textiles. Particularly effective for hard to adhere to surfaces indoors.
tesa®4974	Premium grade removable cloth tape ideal for temporary laying of carpets and flooring in tradeshows and events. Allows for residue free removal.
tesa® 51970	Transparent filmic tape for mounting of lightweight decorative trims and profiles, displays and signage on smooth and slightly irregular surfaces. Also ideal for use in the blinds industry.
tesa® 4965	Premium filmic tape for general mounting applications on smooth surfaces. Ideal for assembling lightbox signage and bonding transparent materials without shadowing.
tesa® 62508	PE foam ideal for general mounting applications, particularly where shock absorption or compensation of uneven surfaces is required.
tesa® 4952	PE foam tape recommended for mirror mounting. Also suitable for constructive mounting applications on flat surfaces such as functional trims and profiles, decorative panels and glass splashbacks.
tesa® 7044	ACXplus high bond tape (1mm) is intended for permanent mounting applications such as in the signage industry. Also suitable for mounting small fixtures, trims and profiles in vehicles.
tesa® 7048	ACXplus high bond tape (2mm) is suitable for mounting panels and cladding on vehicle sub-frames in trucks, buses, caravans and emergency vehicles. Ideal for mounting dissimilar materials.

### Exclusive application testing

In our application laboratories, we analyse the customers' materials in combination with several adhesive tape solutions. Depending on customer-specific demands, our analysis includes tests on resistance to UV light, high and low temperatures, peel adhesion, shock and tension absorption, and much more. The result: adhesive tape solutions that perfectly suit any technical application. For more information on our exclusive application testing contact us on 1800 226 851 (Australia) or 0800 037 269 (New Zealand).



## **APPLICATION GUIDE**

### For Optimal Adhesive Tape Performance

#### **Application Instructions**



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



#### Temperature

Recommended optimal application temperature is from 20°C to 30°C in dry rooms. If possible, tapes should not be applied at temperatures below 10°C unless the tape is designed for application at low temperatures.



#### Application

The tape should be applied to the surface at constant speed and pressure. For optimal results we recommend a uniform pressure, applied with an automatic or manual roller.



Bond build rate The bond strength will increase over time until full strength is reached after approximately 72 hours.

### tesa® tape Supplements for Enhanced Performance

#### tesa® 60040 Industry Cleaner Spray

A versatile spray for fast and effective cleaning of machine and plastic parts as well as glass and metal surfaces. Cleaned surfaces allow for optimum bonding with tesa® adhesive tapes.

#### tesa® 60150 Adhesion Promoter

Used to improve the adhesion of tesa® tapes on different substrates, including PP/ EPDM, zinc, steel and powder coated surfaces. Our Adhesion Promoter is UV traceable, because of UV pigments contained in the solution.

Due to the multitude of available lacquers and surface formulation in the marketplace we recommend to test our Adhesion Promoter prior to usage.











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

tesa® products prove their impressive quality day in, day out in demanding conditions and are regularly subjected to strict controls. All information and recommendations are provided to the best of our knowledge on the basis of our practical experience. Nevertheless 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. Therefore, 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.

For more information on our industry solutions, visit our website www.tesatape.com.au

tesa tape Australia Pty Ltd Phone: 1800 226 851 Email: sales.australia@tesa.com tesa tape New Zealand Ltd Phone: 0800 037 269 Email: sales.nz@tesa.com

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