

tesa® Automotive Paint Masking – Established quality for perfect finishes

Tape technology for the automotive industry
APPLICATION FOLDER





Self-adhesive Masking solutions for coating processes during automotive production

Different coating steps in automotive production require different masking solutions. The specific requirements of each step can be met with the tesa® Automotive Paint Masking assortment. tesa is one of the leading manufacturers of masking solutions. Based on many years of market experience and longstanding relationships with paint manufacturers, high-quality products are engineered to meet the requirements of serial and repair painting.

Features and benefits of tesa® Automotive Paint Masking Tapes

The products offered ensure secure adhesion both on e-coated and painted surfaces, as well as conformability, temperature resistance, shear resistance and residue-free removal. This allows for reliable and fast processes during serial and repair painting.



Precise and fast application, high temperature resistance, residue-free removal: the tesa® Automotive Paint Masking assortment offers the perfect solution for each coating step.



“Mr. tesa”, Hugo Kirchberg, recommended tesa® Masking Tapes to automakers for spray painting processes shortly after he joined the company in 1934. This turned out to be the cornerstone of the tesa Automotive success story.

tesa® Automotive Masking solutions for serial coating

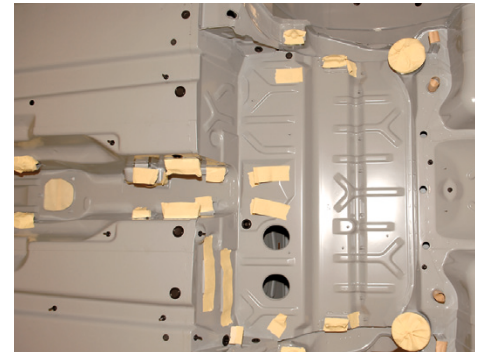
Masking before underbody coating (UBC)

After the e-coating process is completed, holes in the car body are temporarily covered by tesa® Automotive Paint Masking Tapes to protect the surrounding surfaces from the PVC spray during the underbody coating process.

Product requirements:

- Secure adhesion on e-coated metal
- Conformable and impermeable backing
- Easy and residue-free removal

The tesa® Automotive Paint Masking assortment offers reliable solutions for all coating steps.



Flange Masking

When bonding different types of surfaces, such as glass, metal, or CFRP (carbon fiber reinforced plastics) and standard plastic components, clearly defined surface properties are essential for reliable adhesion. One example is the mounting of the windshield glass to the window flange of the car body. Masking flange areas prior to painting is best practice to enable the subsequently applied adhesive to bond directly to the e-coated surface, and therefore reduce complexity (adhesives and primers) and ensure the required bonding reliability.

Product requirements:

- Temperature resistance up to 170 °C
- Compatibility with e-coat and clear coats
- No residues or tearing upon removal

tesa® 7140 is especially designed to fulfill all requirements of Flange Masking.



tesa® Automotive Masking solutions for repair painting

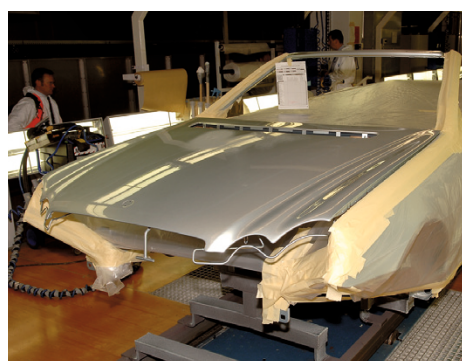
Inline Repair Masking

In case of severe blemishes on the freshly applied paint coat, a second inline paint process may be necessary. To avoid additional coating and sanding processes on areas that were painted perfectly during the first paint application, these can be masked off. When inline repair painting becomes necessary and flange areas have not been previously masked off, inline flange masking avoids a build-up of paint layers, which would further reduce adhesion reliability of components bonded to the flange areas at a later time.

Product requirements:

- Temperature resistance up to 160 °C
- High tack and secure adhesion on painted surfaces
- High shear resistance for fastening of overmasking materials like paper or plastic
- No residues or tearing upon removal

The tesa® Automotive Paint Masking assortment offers reliable solutions for all coating steps.



Final Repair Masking

Small damages to the clear coat can also occur during assembly and must be eliminated during final spot repair. This requires masking products with high initial tack and secure adhesion on a variety of surfaces, such as clear coats, EPDM rubber and plastic. The affected area can be masked off precisely, so that surface treatment and manual spray-painting is minimized.

Product requirements:

- Temperature resistance up to 140 °C
- High tack and secure adhesion on painted and other surfaces (e.g. rubber profiles)
- High shear resistance for fastening of overmasking materials like paper or plastic
- No residues or tearing upon removal

The tesa® Automotive Paint Masking assortment offers reliable solutions for all coating steps.



tesa® Automotive Paper Masking

	Key Characteristics	Temperature Resistance [°C/1hr]	Backing/ Color	Adhesive	Thickness of Tape [µm]	Adhesion to Steel [N/cm]	Tensile Strength [N/cm]	Elongation at Break [%]
tesa® 4318	high temperature masking tape up to 160°C	160	slightly creped/ brown	natural rubber	170	4.0	47	12
tesa® 4302	high temperature masking tape up to 160°C	160	slightly creped/ beige	natural rubber	170	4.0	46	10
tesa® 4330	conformable and wet grinding resistant masking tape up to 140 °C	140	slightly creped/ beige	natural rubber	175	4.8	42	12
tesa® 4341	conformable and wet grinding resistant masking tape up to 140 °C	140	slightly creped/ brown	natural rubber solvent-free	170	4.7	53	13
tesa® 4309	conformable and wet grinding resistant masking tape up to 120 °C	120	slightly creped/ brown	natural rubber solvent-free	170	3.5	47	12
tesa® 4432	highly adhesive and abrasion resistant masking tape up to 100 °C	100	flat/ beige	natural rubber	330	8.0	93	6
tesa® 4316	thin and conformable masking tape up to 100 °C	100	slightly creped/ beige	natural rubber solvent-free	140	3.4	38	10
tesa® 4317	thin and conformable masking tape up to 80 °C	80	slightly creped/ beige	natural rubber solvent-free	140	3.3	38	10
tesa® 4322	highly conformable masking tape up to 60 °C	60	highly creped/ beige	natural rubber	380	5.0	28	58

tesa® Automotive Flange Masking

	Key Characteristics	Temperature Resistance [°C/1hr]	Backing/ Color	Adhesive	Thickness of Tape [µm]	Adhesion to Steel [N/cm]	Tensile Strength [N/cm]	Elongation at Break [%]
tesa® 7140	highly tear-resistant filmic masking tape up to 170 °C	170	PVC/ yellow	natural rubber	181	4.0	100	130

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, expressed 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 advise you.



tesa Automotive: from tradition, passion and conviction

For the past 75 years tesa Automotive has been a constant generator of ideas and a reliable partner to automobile manufacturers and their suppliers. tesa's high-performance self-adhesive tape solutions and pioneering inventions impress customers worldwide. tesa Automotive is working on the future of adhesive tape technology, a key technology of the 21st century, with enthusiasm.



NEW: the tesa® ACX technology

Time and again tesa has been able to set milestones in adhesive tape technology. tesa® ACX is a new, future-oriented technology, specially developed by tesa for constructive bonding. This development will open up a new dimension of possibilities for automobile manufacturers and suppliers in the future. tesa Automotive is equipped to collaboratively find new ideas for constructive bonding applications.



The tesa management system is certified according to the standards ISO 9001, ISO/TS 16949 and ISO 14001. All tesa® products delivered to automotive customers are listed in the International Material Data System (IMDS).

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