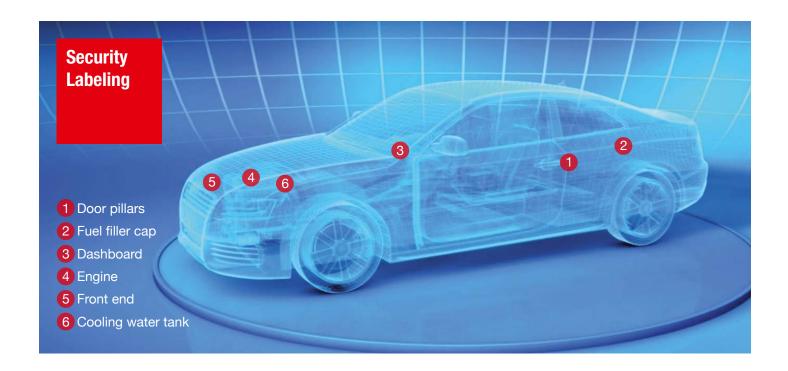


tesa® Automotive Security Labeling — High-precision laser marking technology



Tape technology for the automotive industry APPLICATION FOLDER



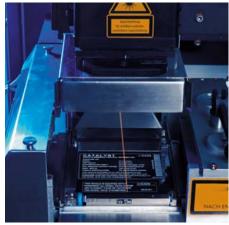


Process optimization using state-of-the-art laser technology for labeling solutions

Whether it is VIN, certification, service, security or warning and instruction information, a variety of labeling systems is required throughout the vehicle. Some have to be absolutely tamper-proof and others have to resist extreme external influences, e.g. in the engine area. tesa Automotive offers a comprehensive assortment of Laser Labels to fulfill all requirements, combining the knowledge of laser marking technologies with expertise in self-adhesive films.

Features and benefits of tesa® Automotive Laser Labels

- Resistance against thermal, chemical and physical influences to survive the entire vehicle lifetime
- Data carrier is destroyed upon tampering
- High contrast and resolution ensures that the label is correctly and easily read
- High degree of flexibility in terms of content, dimension
- High speed laser engraving and cutting of the desired format in one step ensures maximum production efficiency
- Customer-specific visible and hidden security features
- Controlled production and distribution channel for a maximum level of security
- Compliance with legal and manufacturer-specific regulations of the automotive industry





Using a laser beam for label marking is the most advanced industrial identification technology. tesa® Laser Labels offer significantly higher process efficiency and savings compared to metal plates or printed labels.



tesa® Automotive Security Labeling

Product features



Tamper Evidence
Label is destroyed upon
tampering; manipulation
leaves visible traces;
no label transfer possible



Customized Logo DesignMaterial is available with customer-specific logo design



Customized MicroscriptingHidden customer-specific
microscripting maximizes
security



UV FootprintProof of label removal by permanent marking of substrate

The comprehensive assortment of tesa® Automotive Laser Labels offers reliable, efficient solutions for all labeling needs. The contrast of the laser label can be achieved by two different ways of laser marking: On the one hand, information is engraved into the top layer of the material; on the other hand, a color change is generated by the laser energy.



	Category	Tamper Evidence	Low Surface Energy	Customized Logo and Microscripting	UV Footprint (on request)	High-speed Marking
tesa® 6977	Advanced	\checkmark	✓	✓	✓	√
tesa® 6970	Advanced	✓	✓		✓	✓
tesa® 6947	Rapid	✓		✓	✓	✓
tesa® 6940	Rapid	✓			✓	✓
tesa® 6937	Standard	✓		✓	✓	
tesa® 6930	Standard	✓			✓	
tesa® 6931	Basic (Color change)	✓				
tesa® 6910	Basic (Color change)	✓				

tesa® Automotive Laser Labels for Warning & Instruction as well as Security applications

Depending on the type of application, tesa® Automotive Laser Labels are available in different grades, either for standard Warning & Instruction content or for demanding Security information. All tesa® Automotive Laser Labels combine a high performance adhesive with a data carrier that is destroyed upon tampering.

tesa® Automotive Warning & Instruction Labels

Tire pressure and fuel information, engine compartment service instructions, as well as airbag and engine or air conditioning warnings are only some examples of the wide range of labels in use throughout the complete vehicle. tesa® Automotive Warning & Instruction Labels contain user information; they caution the driver against safety hazards and provide service instructions. The cross-linked acrylic label material is ideally suited for a long-lasting and highly resistant application. All labels are tamper-proof and available as a label set for increased process speed and efficiency.



tesa® Automotive Security Labels

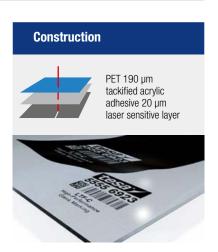
In addition, tesa® Automotive Laser Labels are also available with customer-specific visible and hidden security features integrated into the labels to maximize security against tampering. Throughout the vehicle, tesa® Automotive Security Labels are used for very critical information such as nameplates and vehicle identification numbers (VIN), they securely mark parts and can of course also be used as warning & instruction labels if desired. They are also available as a label set solution.



tesa® Automotive Glass Marking

Next to the standard security labels used on metal and plastics, tesa Automotive offers the unique tesa® 6926 Glass Marking Laser Transfer Film for window pane marking.

- Enables a tamper-proof encoding of car window panes with vehicle-specific data
- Without the use of corrosive substances and without mechanical influences to the glass
- Lettering extremely resistant to abrasive wear, weather, temperature, and chemical influences



	Version	Available Colors Top Layer (Contrast Layer / Color Change)	Thickness of Tape [µm]	Backing	Tackified Acrylic Adhesive [g/m²]	Max. Marking Speed * [mm/s]	Laser Hardware
esa® 6970 / 6977	PV6	Black Glossy (White)	145	Double-layered acrylic	45	4000	Nd:YAG CO ₂
esa® 6940 / 6947	PV6	Black Glossy (White)	140	Double-layered acrylic	35	4000	Nd:YAG CO ₂
esa® 6940 / 6947	PV3	Black Glossy (White) Black Matt (White) Silver Glossy (Black)	95	Double-layered acrylic	25	4000	Nd:YAG CO ₂
esa® 6930 / 6937	PV6	Black Glossy (White)	140	Double-layered acrylic	35	1000	Nd:YAG CO ₂
esa® 6930 / 6937	PV3	Black Glossy (White) Black Matt (White) Silver Glossy (Black)	95 95 111	Double-layered acrylic	25	1000	Nd:YAG CO ₂
esa® 6931	PV0	Transparent (Black) White (Black)	100	Acrylic	25	1000	Nd:YAG
esa® 6910	PV0	White (Black)	100	Polyolefin	25	1000	Nd:YAG
esa® 6926	PV0	Grey (Black)	160	Laser sensitive composites	25	500	Yb:YAG

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 Laser Label Set

The variety of car models and the need to comply with country-specific regulations increase the requirements and complexity of labeling solutions. The tesa® Automotive laser label set combines all labels of one material and for a specific car model in one sheet. This ensures that all labels are applied fast and no label is forgotten. Handling for the one specific label material is improved, training efforts can be reduced and rework is made redundant. Purchasing and laboratory efforts can also be reduced by using the same material for different applications and substrates. In addition, the label set solution also offers savings in logistics, storage and handling costs.



Combining all labels for a specific vehicle in one set ensures that every single label has been applied when the label set is empty.





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).

