TAMPERPROOF ENCODING WITH LASER MARKING

Our Security Labeling Solutions for the Automotive Industry
1. Fuel filler cap
2. Door pillars
3. Dashboard
4. Engine
5. Fender
6. Front end

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

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

- **High-speed laser engraving and cutting** of the desired format in one step ensures maximum production efficiency and a high degree of flexibility in terms of content and dimensions.
- **High contrast and resolution** ensures that the label is correctly and easily read.
- **Laser label set**: all labels for one specific car on one sheet ensure that no label is forgotten.
- **Resistance against thermal, chemical, and physical influences** to survive the entire vehicle lifetime.
- **Controlled production** and distribution channel for a maximum level of security.

### Security features

- **Tamper evidence**: label is destroyed upon tampering; manipulation leaves visible traces; no label transfer possible.
- **Customized logo design**: material is available with customer-specific logo design with visible and hidden security features.
- **Customized micro scripting**: hidden customer-specific micro scripting maximizes security.
- **UV footprint**: proof of label removal by permanent marking of substrates.

### Market Leader in Security Labels

#### Automotive warning and instruction labels

The pressure and fuel information, engine compartment service instructions, as well as airbag, engine and air-conditioning warnings are only some examples of the wide range of labels in use throughout the vehicle. Our warning and 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.

#### Automotive security labels

Our 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, our 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 and instruction labels if desired. They are also available as a label set solution.

#### Automotive glass marking

In addition to the standard security labels used on metal and plastics, we offer the unique tesa® 6926 glass marking laser transfer film for windowpane marking. It enables a tamperproof encoding of car windowpanes with vehicle-specific data. The lettering is extremely resistant to abrasive wear, weather, temperature, and chemical influences. The marking is done without corrosive substances and does not mechanically influence the glass.

### Product and security features

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Automotive laser labels for warning and instruction as well as security applications

Depending on the type of application, our laser labels are available in different grades, either for standard warning and instruction content or for demanding security information. Our laser labels combine a high-performance adhesive with a data carrier that is destroyed upon tampering. They comply with the legal (NHTSA, EU, GB) and manufacturer-specific regulations of the automotive industry.

### Laser label product range

<table>
<thead>
<tr>
<th>tesa® 6957</th>
<th>tesa® 6940</th>
<th>tesa® 6947</th>
<th>tesa® 6990</th>
<th>tesa® 6937</th>
<th>tesa® 6931</th>
<th>tesa® 6910</th>
<th>tesa® 6926</th>
</tr>
</thead>
</table>

**Technical data**

<table>
<thead>
<tr>
<th>Category</th>
<th>Rapid</th>
<th>Rapid</th>
<th>Rapid</th>
<th>Standard</th>
<th>Standard</th>
<th>Basic (color change)</th>
<th>Basic (color change)</th>
<th>Glass marking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. marking speed [mm/s]</td>
<td>4,000</td>
<td>4,000</td>
<td>4,000</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
<td>500</td>
</tr>
</tbody>
</table>

**Laser hardware**


**Available colors top layer**

| Black glossy | Black glossy, black matte | Black glossy, black matte, silver glossy, silver matte | Black glossy, black matte, silver glossy, silver matte | Transparent white | Transparent white | Black |

**Backing**

| Double-layered acrylic | Double-layered acrylic | Double-layered acrylic | Double-layered acrylic | Double-layered acrylic | Acrylic | Polyolefin | Laser-sensitive composites |

**Tamper evidence**

| ● | ● | ● | ● | ● | ● | ● | ● |

**Customized logo and micro scripting**

| ● | ● | ● | ● | ● | ● | ● | ● |

**UV footprint (on request)**

| ● | ● | ● | ● | ● | ● | ● | ● |

**High heat resistance**

| ● | ● | ● | ● | ● | ● | ● | ● |

**High-speed marking**

| ● | ● | ● | ● | ● | ● | ● | ● |

**Different thicknesses**

| ● | ● | ● | ● | ● | ● | ● | ● |

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