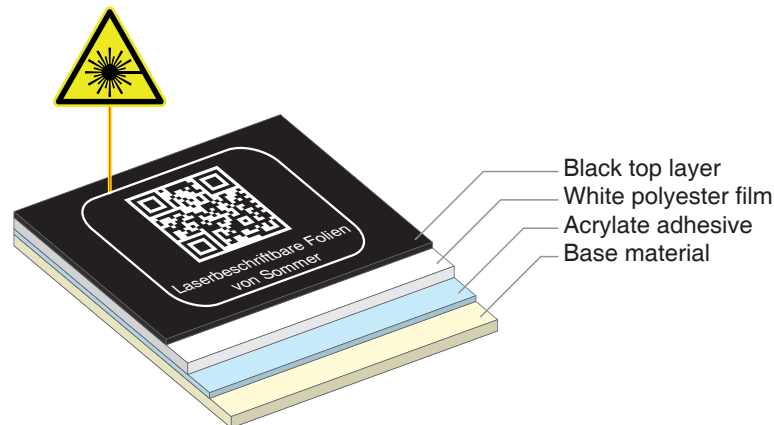


## Laser markable film som8010

Laser markable film som8010 consists of a specially developed polyester film with an extremely durable black top layer.

Our product has been specially developed for marking and contour cutting using all commercially available laser marking systems. The very precise and high-contrast marking is created by removing the special black coating from the white polyester film underneath.



Used predominantly for product labelling in demanding industrial environments with high requirements regarding chemical, temperature and weather resistance, as well as abrasion and ageing.

The high-performance acrylic adhesive can be used universally and achieves excellent final adhesion even on low surface energy substrates.

### Features

- Labels for the highest demands associated with durable products in the automotive and mechanical engineering, appliance and electrical industries
- Accurate, high-contrast marking with optimum code readability
- Saves energy, marks more rapidly and cuts emissions due to reduced substance removal (only top layer instead of acrylate film)
- Easy to apply due to high inherent stability of the PET film
- Extremely resistant to chemicals, solvents, heat, weathering, abrasion and ageing
- Highly efficient and flexible thanks to marking and contour cutting in a single operation
- Saves time thanks to pre-cut labels with fixed label sizes

### Product variants

- Safety elements for non-destructive detachment
- Tamper-proof thanks to UV imprint
- Individual, application-related development of special adhesives and base materials

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**Technical data**

Upper material	White polyester with black top layer optimised for laser marking, 55 µm
Adhesive	Acrylic, 27 µm (application-optimised special adhesives possible)
Base material	Special coated paper, 60 µm

**Properties****1.) Adhesive strength**

Surface	N/25mm
Glass	25
Aluminium	22
Steel	23
ABS	26
Nylon	24
Polycarbonate (PC)	26
Polyester (PET)	27

(measured according to FTM 1 after 48h storage)

**2.) Chemical resistance****2.1.) Adhesion measurement after immersion in test liquid**

Chemical	N/25mm	Visual inspection
Diesel	24	No change
Petrol	21	No change
Engine oil	23	No change
Brake fluid	27	No change
Ad Blue	12	No change

(measured after FTM 1 and 4-hour immersion of the sample foils in the respective test liquid)

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**2.2.) Friction test**

Chemical	Visual inspection	Readability / Quality of the QR code after test duration
Acetone	Improved contrast due to stronger white tone of the lasered areas after the friction test, as the friction removed the residues of the marking process	Higher QR code quality due to better contrast
Bioethanol E85		
Petrol		

(Laser-marked material was subject to friction force in a Crockmeter with a wetted cotton cloth for 10 cycles, followed by visual inspection and determination of QR code quality)

**2.3.) Immersion test**

Chemical	Duration	Temperature	Readability / Quality of the QR code after test duration
Diesel	24h	+20°C	No change
Engine oil	24h	+70°C	No change
Petrol	30 Min	+20°C	No change
Plastic cleaner	1h	+20°C	No change

(Unlabelled material was immersed in various chemicals and then visually assessed)

**3.) Temperature / climate change resistance**

Test conditions / standard	Visual inspection	Shrinkage
Temperature: 130°C for 72h	No change	No shrinkage
Cyclic climate change test according to Volkswagen standard PV 1200 (+80°C / -40 °C)	No change	No shrinkage

**4.) Weather resistance**

Duration	Colour change Delta E	Gloss 60°	Readability / Quality of the QR code after test duration
before weathering	-	80	
500 hours	0,4	79	excellent
1000 hours	0,7	77	excellent
1600 hours	1,3	77	excellent

(Weathering test according to Volkswagen PV 3930 standard (Floridatest))

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5.) Abrasion / scratch resistance

Test conditions / standard	Visual inspection	Readability / Quality of the QR code after test duration
Abrasion Resistance Laser Marked Material, Taber Abraser CS10 Wheel, 500g after 200 Cycles	Improved contrast due to stronger white tone of the lasered areas after abrasion test	Higher QR code quality due to better contrast
Scratch resistance On unmarked material with Erichsen scratch pin, 5N force application	Immediately / 24h after test: no abrasion on surface, but visible indentations on material	not applicable

6.) Certifications

UL/CSA planned until 01/2023

*Strategic partnership with CAB*

Process-safe complete solution

- Perfect coordination of laser material and marking hardware for a holistic optimal solution
- Faster and more efficient solution finding for customer-specific requirements or unusual problems
- Decades of experience in product labelling and the high demands of automotive engineering



*Further information on the LM+ laser marker*

**Storage:** If stored properly (room temperature 20°C, humidity 50%), the product can be used for a period of approx. 24 months without significant changes to the product properties.

The information we provide on suitability reflects our current experience. For further advice regarding a special application, our application specialists are at your disposal. In any case, a suitability test should be carried out under the respective conditions of use and on original substrates. The values listed in the data sheet are average values. This information is not binding, does not constitute a guarantee and is, therefore, not intended for technical specifications.

