

## Labels for the automotive industry

Standard-compliant and functional labeling



# Documenting, protecting, insulating and sealing in the automotive industry

Products and goods must be labeled reliably and in compliance with standards. Those are for e.g. battery and tire labels, airbag labels, warning and safety labels, labels for variable data, barcode labels and many more. Moreover, the automotive industry requires robust labels for the labeling of their packaging, for the manufacturing control or for the documentation purposes.

The customer projects and their area of application, result in special requirements to the labeling, like thermal, chemical, or mechanical resistance of a label.

Along with the identification and optical marking of the products, a big part of our products also fulfills further functional requirements.

That is why we also speak of multi-dimensional labeling products. Further functionalities can be for example the documenting, protecting, insulating, or sealing.

The main qualitative requirements to the technical-industrial labeling in the automotive industry are durability, adhesive power, standard compliance and documentation.

In line with this, premium materials and adhesives in combination with modern manufacturing plants are essential.

## ■ Resistance of labels

Heat, cold, chemicals, abrasion, indoors/outdoors, etc.

## ■ Adhesive power of labels

Onto difficult, rough, oily, low-energy substrates, etc.

## ■ Standard compliance of labels

Labels with UL/CSA certification, sea-water resistance, REACH/RoHS, etc.

## ■ Applicable documentation requirements

Sampling in accordance with VDA or AIAG, etc.

## Our services & technology

Our material portfolio includes more than 500 special materials. From this we provide our customers with extensive information and material samples. These can also be individually printed and die-cut as part of an initial sampling process under series conditions.

A large number of these materials already has special certifications from the areas of UL/CSA, automotive and medical technology. In the UL/CSA area we have already listed over 20 own certifications (combinations of defined self-adhesive foils and printing methods), which can be used fast for individual projects. If certifications do not exist, then we take over the entire approval- and documentation process.

Technologically, we rely on the mix of conventional and digital technology, because in the technological industrial environment there are requirements which cannot be completely covered by digital technology. Therefore we use the best of both worlds and combine and link both sensibly and effectively.

In the conventional area we rely on flexo and silkscreen printing as well as on multilayer- and booklet manufacturing. In digital printing we work with HP Indigo ElectroInk technology as well as with UV inkjet method.

## We have:

- Conventional die-cutting machines and laser die-cutting technology for multidimensional functional components as well as modern cutting machines, which complete our machinery
- Camera systems and a digital measurement system for process control and documentation
- Automated data handling (automation engine for proofing/step and repeat etc.)

## Our subsidiary Folit

The Folit GmbH is a 100% subsidiary of robos-labels and has focused on special materials by the manufacturers 3M, Flexcon, Tesa, and Lintec for over 30 years. Folit is one of five biggest 3M traders and converters in Europe, also offers self-constructed material combinations for special applications and has a machinery with most modern cutting- and laminating machines.

# Reliable labels for the highest requirements

## The technical labels of robos-labels fulfil extensive requirements:

- Temperature resistance from 572°F up to -320,8°F
- UV and weather resistant foils up to max. 10 years
- Very thin (min. 6µ) as well as very thick (500µ) combinations of the foils possible
- High performance materials made of acrylate foil, polyimide foil, aluminum foil and polyester
- Permanent / repositionable / removable adhesives for high- and low-energy substrates
- Diverse carrier materials like compressed kraft paper in different thicknesses, transparent plastic liner, kraft paper siliconized on both sides, and environmentally stable kraft paper available
- Subsequently inscribable with thermal transfer printing, laser engraving, and inkjet method
- Delivery form roll, sheet, or set



Label for a cast part, temperature resistant up to 572°F



Robust label with individual die-cutting



Serialized label with partial die-cutting for removable documentation elements

**The serialized / personalized labels** can contain a consecutive numbering, coding, or also personal data

The individual labeling per product with encrypted codes additionally offers numerous possibilities in the automated manufacturing and logistics for the entire product life cycle.

Imprinted data matrix codes contain extensive supplementary information which can be retrieved via stored data bases by scanning of the 2D and 3D codes. The labels can be subsequently inscribed with further individual data directly at the customer's site.

Typical labeling products for the vehicle exterior, interior  
and the engine compartment

Labels for the documentation  
of installation, repair and  
maintenance

Lacquer protection labels

Labels with safety information  
and instructions for use in the  
interior

Labeling in the fuel  
tank cap or engine  
compartment



Labeling of transmission,  
axle and brake systems

Labels for tire pressure

Warning and consumer infor-  
mation regarding heat and  
chemicals resistance



The image displays a variety of automotive components, including suspension arms, shock absorbers, brake calipers, pistons, valves, and a large circular metal part, all arranged around a central car wheel hub. The parts are shown in a clean, white background, highlighting their metallic textures and shapes.

Labels for traceability,  
batch numbers

Labels for brand recognition,  
brand formation and decoration

Labeling on electronic parts  
in the interior

Labels for tamper protection,  
counterfeit safety

Airbag labeling/ product  
identification

Information on batteries and  
containers for liquids

Safety information and instructions  
for use for engine parts and vehicle  
data

Product identification in the  
engine compartment on  
parts, cables and hoses

The image displays a wide array of automotive components, including suspension arms, shock absorbers, steering knuckles, brake calipers, rotors, disc brakes, air filters, oil filters, and various sensors and actuators. These parts are arranged in a circular pattern around a large, detailed car wheel hub, which serves as the central focus. The background is white, making the metallic and plastic parts stand out.

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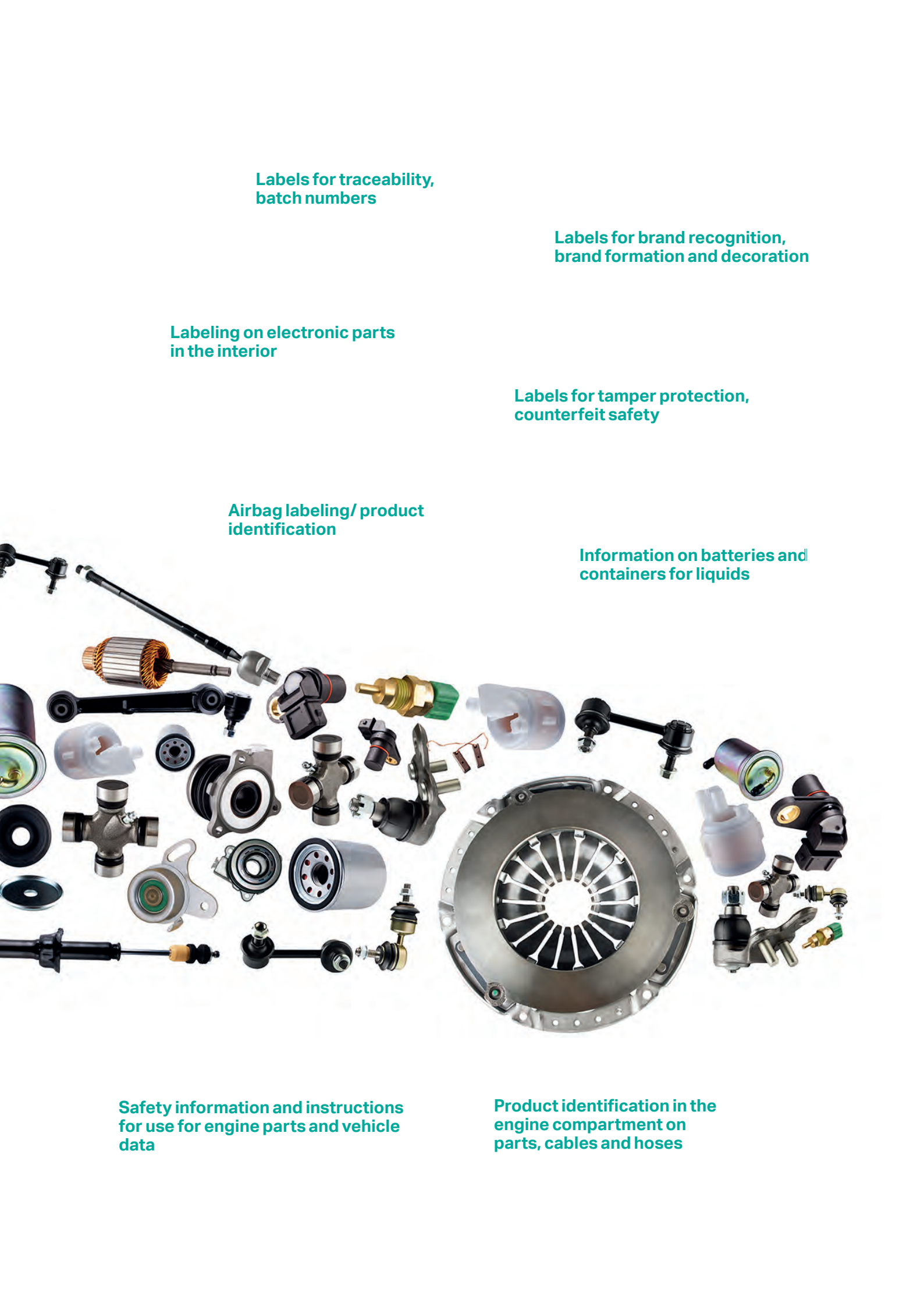
Safety information and instructions  
for use for engine parts and vehicle  
data

Product identification in the  
engine compartment on  
parts, cables and hoses

[illegible]

The image displays a wide array of automotive components, including suspension arms, shock absorbers, brake calipers, rotors, and various fluid reservoirs, all meticulously arranged in a circular pattern surrounding a large, detailed car wheel hub. This visual arrangement serves as a backdrop for several key labeling requirements:

- Labels for traceability, batch numbers**
- Labels for brand recognition, brand formation and decoration**
- Labeling on electronic parts in the interior**
- Labels for tamper protection, counterfeit safety**
- Airbag labeling/ product identification**
- Information on batteries and containers for liquids**
- Safety information and instructions for use for engine parts and vehicle data**
- Product identification in the engine compartment on parts, cables and hoses**

[illegible][illegible]

The image displays a wide variety of automotive components scattered across a white background, centered around a large, detailed view of a car's front wheel hub and brake assembly. The parts include suspension arms, shock absorbers, steering knuckles, ball joints, tie rods, control arms, CV axles, drive shafts, universal joints, constant velocity joints, idler arms, sway bar links, coil springs, coil-over shocks, struts, stabilizer bars, anti-sway bars, brake calipers, brake pads, brake discs, brake rotors, brake master cylinders, brake boosters, brake lines, brake hoses, brake valves, brake solenoids, brake sensors, brake actuators, brake relays, brake switches, brake lights, brake pedals, brake levers, brake handles, brake cables, brake chains, brake belts, brake pulleys, brake rollers, brake guides, brake pins, brake bushings, brake washers, brake spacers, brake sleeves, brake collars, brake flanges, brake hubs, brake drums, brake shoes, brake linings, brake friction material, brake pads, brake discs, brake rotors, brake calipers, brake pistons, brake seals, brake O-rings, brake gaskets, brake bolts, brake nuts, brake screws, brake rivets, brake welds, brake glue, brake grease, brake oil, brake fluid, brake air, brake vacuum, brake pressure, brake temperature, brake wear, brake noise, brake vibration, brake smell, brake taste, brake touch, brake feel, brake sound, brake sight, brake smell, brake taste, brake touch, brake feel, brake sound, brake sight.

Labels for traceability,  
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Product identification in the  
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[illegible]

# Intelligent product solutions for the automotive industry: Robust, durable and compliant with standards



Labels for covering of parts openings with pull-off tab



Flexible cable wrap labels for tight rounding with high adhesive power

## Functional adhesive applications

- Connecting elements (adhesive frames)
- Functional labels made of plastic foil with cutouts and punching
- Precise blanked parts: sealing, insulation, isolation, protection and connection
- Overpressure protection labels for the pressure balance of internal overpressure



Hologram label with void function for manipulation protection

## Labeling with protective functions

- Hologram labels for the protection against plagiarism and for premium product decoration
- Transfer-proof labels with protection against manipulation
- Adhesive seals for the documentation of opening and manipulation
- Labels with protective function for the documentation of the initial opening or manipulation

## Labeling for extreme temperature ranges

- Low-temperature labels for machines, plants and automotive

- Labels for the labeling of circuit boards
- High-temperature labels for machines, plants and automotive

## Standard-compliant labeling

- Labels with UL certification and CSA certification
- Seawater resistant labels for the safe labeling of hazardous materials
- Label flammability in accordance with FMVSS 302 standard (Federal Motor Vehicle Safety Standards)

## Labeling for front plates and control elements

- Control foils and keyboard foils as a protective cover for keys and control lamps
- Front panels and decorative foils for the permanent labeling

## Labels for subsequent inscription

- Preprinted labels for the subsequent inscription with variable data
- Blank labels for the subsequent inscription with variable data

## Labeling for cables and tubes

- Tube labeling with wrap.-around labels or flag labels
- Flag labels for more information on cables and tubes

## Labeling with variable data

- Serialized and personalized labels for the labeling with variable data
- Barcode labels for the labeling with variable data

## Protective foils

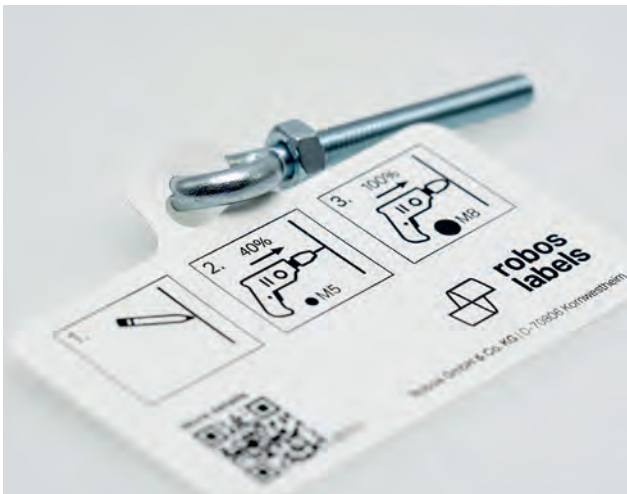
- Lacquer protection labels with temporary protection during the coating and against soiling and scratches during the production
- Labels for the sealing of part openings
- Labels for protection of surfaces against scratches and abrasion

## Labeling on little space

- Double-sided readable labels for adhesion on transparent surfaces

## Labeling for identification

- Labels with retractable laminate for subsequent inscription by hand or with thermal transfer printing
- Labels for the documentation of information and procedures
- Labeling of small load carriers (slc)
- Type plate labels for safe identification



Waterproof tag labels with warning and consumer information



High-temperature label resistant up to 572 °F (+300 °C)



Labeling of small load carriers (slc)

## Labeling for demanding surfaces and environments

- Laser labels with highest resistance for industrial use
- Labels for oily, dirty, and dusty substrates
- Chemicals- and solvent resistant labels for difficult surfaces
- Outdoor labels with highest resistance for outdoors
- Labels for rough surfaces
- Labels for the labeling of low-energy surfaces

## Labeling with warning and consumer information

- Tag labels for labeling with warning- and consumer information
- Tactile labels with raised information like braille fonts or warning signs
- Battery and coolant labeling
- Consumer information for the vehicle exterior and the engine compartment
- Consumer information in the vehicle interior

## Labels with UL certification for the Northern American market



- Robos-labels is a manufacturer of UL-certified labels and also entitled to print any UL sign on the labels since 1993 (cf. Authorized Label Supplier Program PGAA).
- UL is a globally recognized institution and system, whose requirements and tests focus on their security and integrity.



# Certified label solutions for the automotive industry

As a manufacturer robos-labels has a wide range of already approved and certified labeling solutions. When additional customized licenses are required, we can take on the approval- and certification process if desired.

We also cover the first article inspections (PPF, production process and product release) in accordance with the specifications of German Association of the Automotive Industry (VDA) as well as the American counterpart, a PPAP inspection (Production Part Approval Process) of the AIAG (Automotive Industry Action Group).



Serialized type plate label on a cast part with rough oily surface



Labeling of tubes for difficult surfaces and rounding



Labels for laser engraving for highest resistance

## We meet the following standards and regulations with our raw materials:

- UL969A:2020 Standard for Marking and Labeling Systems – Flag Labels, Flag Tags, Wrap-Around-Labels and Related Products
- UL817 Safety cord sets and power supply cords
- UL2238 Cable assemblies and fittings for industrial control and signal distribution
- UL94 Flammability of plastic materials for parts in devices and appliances (UL VTM-0 strictest classification)
- FMVSS 302 Evaluation of the flammability of interior materials (flammability/burn rate)
- FORD WSS-M99P41-A72
- MS-13445 (FCA – Fiat Chrysler Automobiles)
- TL 52038 (Volkswagen standard)
- GMW14573 (General Motors)
- TM-0030T-Y (Tesla)
- GS 97058 (BMW)
- MS 373-12 (Hyundai)
- DBL 8230 (Mercedes-Benz)
- TSM7508G (Toyota)
- REACH, RoHS and IMDS conformity
- ADR 2021 Ordinance on the transport of dangerous goods by road, rail and inland waterways (GGVSEB)
- CLP Regulation (Classification, Labelling and Packaging, in accordance with EC No. 1272/2008)
- BS 5609 Label resistance to saline sea water
- DIN EN ISO 11683:1997-11 Packaging – Tactile warnings of danger – Requirements
- FDA 175.105 Indirect Food Additives: Adhesives and Components of Coatings



# Individual features of labels for the automotive industry

## Selected material combinations for every application

Our material combinations fulfil all requirements of the supply chain processes and all common regulations and test parameters of the automotive industry and OEM (Original-Equipment-Manufacturer). The main focus here is on the adhesive power of the labels after the progressing aging stages, excellent chemical resistance and the resistance of the printed image to mechanical loads.

## Different test methods

Each OEM has its own standards in terms of the test methods for the examination of aging, the adhesive power, chemical resistance as well as resistance to mechanical load. In terms of material aging, our labels often have to pass tests with extreme heat, cold, humidity and changing cycles on the customer's original substrate.

The adhesive power will be mostly tested with the existing Finat test methods. In addition, there are wiping, submerging and dripping tests with defined chemicals as well as mechanical abrasion tests, each within the framework of specified and customer-specific parameters. In addition, tests for material flammability, as well as a salt spray test or an additional steam jet cleaner test may be required.

## IMDS listing of material

In addition, we have an IMDS ID number and list our materials in the IMDS (International Material Data System), an international and browser-based database of the automotive industry, which provides information about the composition of our materials and where the lists of prohibited substances can be retrieved.

## Individual features of automotive labels in engine compartment and in the exterior

Especially in the engine compartment, on the underbody or on a gas tank cap the labeling products are exposed to adverse conditions. In addition, there are substrates to be labeled, some of which are highly energetic, but are also partly difficult to label.

This includes porous, rough, small or slightly oily surfaces, cast iron, coatings with powder coatings or hammer paint.

We meet all those requirements and will gladly support you with the right solution for your project.





The managing partners Daniel Sugg and Simon Reuter



Our site in Moldengraben combines administration and production

## With robos-labels you are in good hands:

Robos-labels employs over 100 employees. The company headquarters is located in the immediate proximity of Stuttgart, where the administration and production were combined in a modern new building in beginning of 2018.

Robos-labels was founded in the year 1960 and now has over 20 modern printing and processing machines. Along with the classical printing methods like silkscreen and flexo printing mainly modern digital printing methods will be used.

In addition, a fully automated video control system, a booklet machine and a laser die-cutting machine are available.

In recent years, robos-labels has particularly specialized in the production of high-performance labels for the technical and chemical industry and for the automotive and medical technology areas and supplies customers in more than 30 countries.



### All benefits at a glance

#### Specialized in labels with UL certification for the Northern American market

- Robos-labels is a manufacturer of UL certified labels since 1993 and is entitled to print any kind of UL sign on the labels (cf. Authorized Label Supplier Program PGAA)
- UL is a globally recognized institution and system, whose requirements and tests focus on their security and integrity.
- Our labels meet the requirements of UL969 "Standard for Safety for Marking & Labeling Systems" as well as CSA 22.2
- Label with UL certification are available with variable data prints and wide color range
- Robos-labels has over 20 own UL certifications for in- and outdoors – this way a time- and cost-intensive certifications will be prevented

#### Your experienced partner for tailor-made labeling with special requirements

- 3M certified processor
- Listing in the International Material Data System (IMDS)
- Robos-labels has an EDI connection
- The company is certified in accordance with ISO 9001:2015 since 1996 and in accordance with ISO 14001:2015 since 2009
- Robos-labels is an A-grade supplier for numerous industrial brand companies
- We offer you tailored solutions
- Delivery rolled or sheeted or with pull-off aids like e.g. pull-off tab or back slit possible

Our **sampling service** will be glad to send you labels and material samples non-binding and free of charge.  
Email: [request@robos-labels.com](mailto:request@robos-labels.com)



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**Our sampling service for you:**

We will be happy to non-bindingly send you label and material samples individually tailored to your needs: [request@robos-labels.com](mailto:request@robos-labels.com)

**We are looking forward to your call!**



**3M**

Zertifizierter Verarbeiter  
Kennzeichnungsprodukte

