robos labels

Labels for the automotive & mobility industry

Standard-compliant and functional labeling

visions
made
viable

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

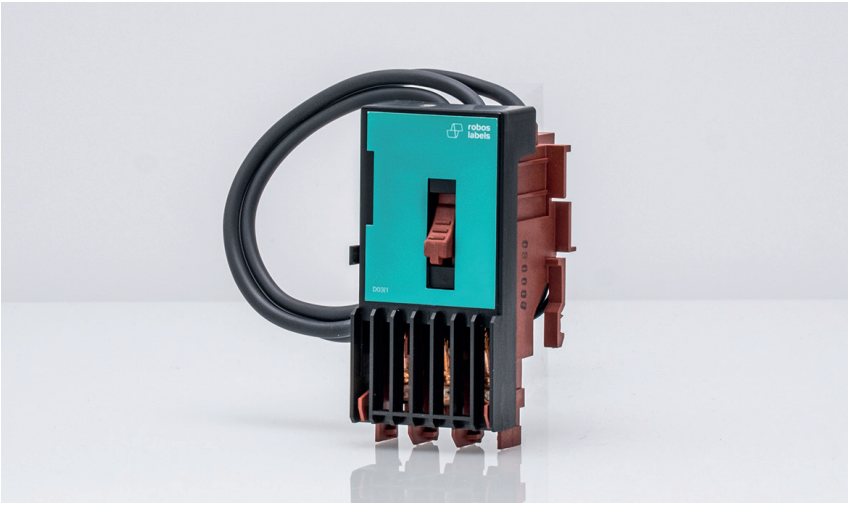
The Folit GmbH is a 100% subsidiary of robos-labels and has focused on special materials by the manufacturers 3M, Flexcon, Tesa, and Lintec for over 30 years. Folit is one of five biggest 3M traders and converters in Europe, also offers self-constructed material combinations for special applications 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 information regarding heat and chemicals resistance

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

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

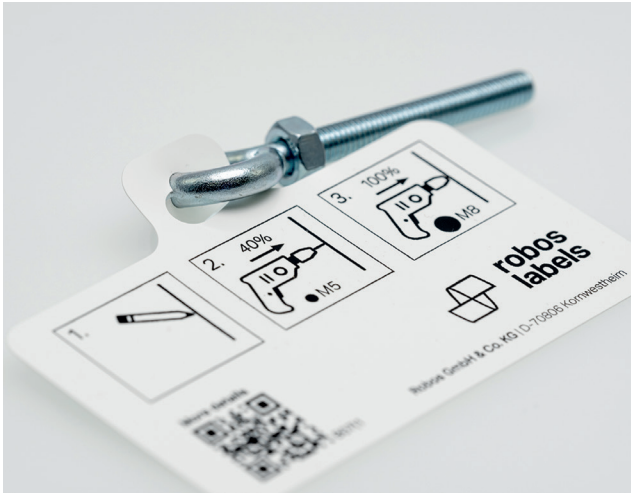
- Lacquer protection labels with temporary protection during the coating and against soiling and scratches during the production
- Labels for the sealing of part openings
- Labels for protection of surfaces against scratches and abrasion

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 interio

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

Contents of the PPF and PPAP Sampling Procedures

PPF Sampling According to VDA

PPF sampling of labels comprises production process and product approval in accordance with the standards of the German Association of the Automotive Industry (VDA).

For this purpose, robos-labels produces representative sample labels according to the customer's requirements. These labels are tested in detail in accordance with VDA specifications and/or customer-specific requirements. The measurement results are formally documented in the specified documents.

By testing and measuring a wide range of parameters, robos-labels ensures that all applicable legal requirements as well as the customer's requirements for the label are met. This allows the customer to delegate a large part of the required testing to robos-labels and provides a reliable basis for approval.

The scope of the PPF procedure is agreed between the customer and supplier. The current edition of VDA Volume 2 and the customer-specific requirements apply.

Variant 1:
Submission of sample parts and limited supporting documentation. (Suitable for products with a low maturity risk and/or product families where no special characteristics are involved.)

Variant 2:
Submission of sample parts and almost complete documentation.
(Standard PPF procedure with defined categories if no other agreements exist.)

Variant 3:
Submission of sample parts and complete documentation.
(Standard PPF procedure with all documents for defined categories submitted to the customer. Product and Process FMEA, Production Control Plan and measurement system capability studies are excluded.)

The PPF procedure is documented using the EMPB (Initial Sample Inspection Report for labels). This inspection report provides documented evidence that the requirements for the labels have been met.

EMPB (Initial Sample Inspection Report)

The EMPB (Initial Sample Inspection Report for labels) is the documentation used for PPF sampling of labels. It covers production process and product approval in accordance with the standards of the German Association of the Automotive Industry (VDA). The EMPB is based on the standards and requirements defined in VDA Volume 2 (Quality Assurance for Supplies).

PPAP Sampling According to AIAG

PPAP sampling (Production Part Approval Process) is the American counterpart to the PPF sampling procedure.

The PPAP submission process for initial sampling was developed by the American Automotive Industry Action Group (AIAG).

There are five different sampling levels

Level 1: Part Submission Warrant (PSW) only and Appearance Approval Report (AAR) for appearance items, if applicable.

Level 2: Part Submission Warrant (PSW) with sample parts and limited supporting documentation.

Level 3: Part Submission Warrant (PSW) with sample parts and complete supporting documentation.

Level 4: Part Submission Warrant (PSW) and other requirements as defined by the customer. The specific submission and retention requirements are determined by the customer.

Level 5: Part Submission Warrant (PSW) with sample parts and complete supporting documentation available for review at the supplier's manufacturing location.

www.robos-labels.com

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 75 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

robos labels

Certified Converter
Identification Products

visions
made
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