



Dieter Wölfle
Chairman and CEO

The layout of our 10th Wölco News issue has been completely updated. The exacting quality expectations of our customers have consistently increased since 2003, when we published our first issue. We have transparently communicated the numerous requirements premium quality function components for a whole range of innovative labeling solutions have to meet and discussed a variety of related topics from the very beginning. As it is our objective to continue to keep up with the dynamics of the industry we have modernized the visual design of our News and made them more contemporary. The aim of this image update, which goes hand in hand with many novel ideas, is to document our continued commitment to our tradition of consistent customer focus and our high standards of innovation.

The launch of our updated version of Wölco News goes hand in hand with the roll-out of our in-house Wölco improvement program Fit For Future. The objective of this program is to harness the powers of continuous employee motivation to quickly localize and implement all improvement potential without getting tangled up in red tape. Obviously, one of the intended consequences of this in-house activity will be the optimization of customer-relations processes and even smoother and more transparent communication. Within the framework of this targeted improvement program we will take the challenges head-on by enforcing stringent quality standards and applying them to everything we do.

The fact that we are already on the right path is evident in the 10-year anniversary of our subsidiary Woelco Labeling Solutions, which was established in 1998 and has been successfully operating on the U.S. market ever since. ■



Important initiatives for continuous improvement

Three steps to success

“Fit For Future” is the heading under which we are re-launching our existing in-house ISO/TS 16949-based system for continuous improvement, which allows all of our employees to make targeted proposals to the company. Building on the foundation of the three Fs contained in the title “Fit For Future” our company will attain fitness through three programs. The units involved will be the entire administration and production department as well as logistics/shipping and system technology.

The first objective the program will focus on is the process of continuous improvement. In this part of the program it will be imperative to quickly implement numerous steps towards improvement in easy-to-manage teams. Each employee and/or the individual departmental teams bring their ideas and proposals aiming at the optimization of their daily work processes to the table. The improvements are rapidly targeted and implemented in the team’s direct work environments. Ultimately, we will attain great benefits thanks to the continuity and large number of individual ideas. The next module of the “Fit For Future”

initiative focuses on the ICM – the Improvement and Correction Measure. It aims at the identification and implementation of targeted improvement measures.

Targeted improvement measures

During this process, we implement certain measures in-house and monitor compliance with deadlines based on the corporate goals we have set or the pertinent audit results. Consequently, in the medium term, we achieve the planned optimization throughout the entire management system.



CIP 

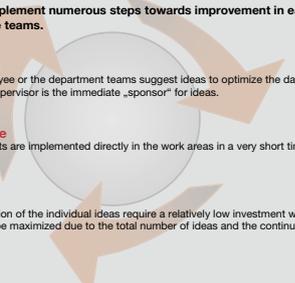
Continuous Improvement Process

Goal
Quickly implement numerous steps towards improvement in easy-to-manage teams.

Approach
Every employee or the department teams suggest ideas to optimize the daily work. The supervisor is the immediate „sponsor“ for ideas.

Advantage
Improvements are implemented directly in the work areas in a very short time (2-3 weeks.)

Benefit
Implementation of the individual ideas require a relatively low investment while the benefit can be maximized due to the total number of ideas and the continuous suggestions.



ICM 

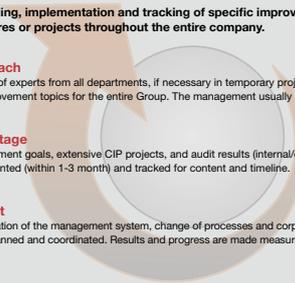
Improvement and Corrective Measures

Goal
Recording, implementation and tracking of specific improvement measures or projects throughout the entire company.

Approach
Groups of experts from all departments, if necessary in temporary project teams, work on improvement topics for the entire Group. The management usually initiates this process.

Advantage
Management goals, extensive CIP projects, and audit results (internal/external) are implemented (within 1-3 months) and tracked for content and timeline.

Benefit
Optimization of the management system, change of processes and corporate procedures is planned and coordinated. Results and progress are made measurable.



AQM 

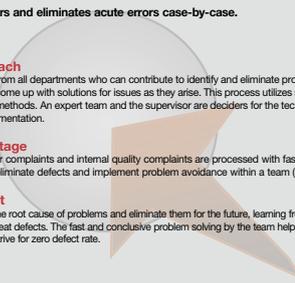
Auto Quality Matrix

Goal
Uncovers and eliminates acute errors case-by-case.

Approach
Experts from all departments who can contribute to identify and eliminate problems work in a team to come up with solutions for issues as they arise. This process utilizes specific problem solution methods. An expert team and the supervisor are deciders for the technical or methodical implementation.

Advantage
Customer complaints and internal quality complaints are processed with fast corrective actions to eliminate defects and implement problem avoidance within a team (within 1 week).

Benefit
Finding the root cause of problems and eliminate them for the future, learning from issues and avoid repeat defects. The fast and conclusive problem solving by the team helps us to consequently strive for zero defect rate.



The third pillar of our improvement strategy is the AQM - the Auto Quality Matrix. It uncovers and eliminates acute errors in individual cases. Experts from all departments who have knowledge and skills to contribute to our improvement process come up with solutions for issues as they arise. As a result, both, external, as well as in-house error reports can quickly be addressed by the teams. Problems can be eliminated for

good. The main emphasis of the overall improvement process is always on attaining a zero error rate and maximum product quality so that we can meet our customers' high standards day after day. Thanks to efficient work processes, increased productivity and a motivated team of employees who are actively involved in the creation of their work environment we are in a position to attain optimum work results. ■

The improvement process is already well underway

Since April 2008, the proposal submitted are discussed in the individual teams at weekly meetings, where they are also further processed. To date, we have reviewed a total of more than 150 improvement suggestions; many of which have already been implemented. To keep the system going in the long term, we have introduced an attractive bonus program.

In-house training program launched with great success

Model for the future: Wölco Academy

Whether participants attend a workshop, seminar, coaching session or simulation game - the Wölco Academy provides an activating learning environment that motivates everyone to get involved.

Wölco is rolling out a continued education initiative with its in-house training program now available under the auspices of the Wölco Academy. The curriculum prepares staff members from all departments for the ever more complex labeling technology topics. Company experts facilitate targeted know-how in seminars.

The training programs are integral parts of our overall strategy that aims at ensuring the continued evolution of Wölco as a learning organization and at consistently updating the knowledge base of our workforce to the state-of-the-art. As an open-minded company characterized by individuality we support mechanisms that drive learning processes. Seminar participants obtain new knowledge that is practice-based in small groups. New recruits quickly and effectively absorb their essential expert know-how at Wölco Academy sessions as well. The goal is always to facilitate insider knowledge from our specialized departments in small units. Upon completing each training module, the employee receives a certificate that documents the qualification he or she is obtained. ■



New Internet presentation provides more information

Re-launch on the web

Our website boasts a bold new look since July 1, 2008. The modern layout emphasizes the international approach of our enterprise and offers an easy-to-use database supported user interface that makes it easier to search through the wealth of information we provide online. PDF files with data sheets highlighting individual products such as labels or labeling machines are available for instant download. Users can also subscribe to Wölco News using a simple registration tool. At this time, the website is available in German and in English, however a Chinese version of the site is also planned for launch in the near future.





UL approval is required in the U.S.

Labels for the U.S. market

Any electrical product marketed in the U.S. or Canada requires either UL or CSA approval. UL is an independent U.S. organization (Underwriters Laboratories, Inc.) established in 1894. It inspects goods of all kinds that are imported into the U.S. market or manufactured locally in the interest of public safety.



When goods are presented to UL for inspection it is important to remember that all components of the device will be verified, including the labels. The standards stipulated in UL Specification 969 called Standards for Marking and Labeling Systems specify the requirements for marking and labeling systems.

All product components must be listed

Wölco has been using UL approved adhesive materials for its labels for the U.S. market for many years. In the past, when customers performed inspections of competitor products the latter frequently found themselves confronted with unpleasant surprises if not all components of a product (including

the labels) were UL listed in compliance with the applicable standards. When selling products in the U.S. it must be taken into account that all participants of the supply chain have to be listed with UL as companies along with their products. In other words, the respective material has to be listed by both, the adhesive manufacturer and the company that processes it. ■

Approved as a printable version under UL File No. MH25096
Unprinted or printed label with various thermal transfer color ribbons.

White	Silver	Transparent
Material 3105 1005	Material 3205 1003	Material 3003 1005
Material 3105 1000	Material 3205 1004	Material 3003 2005
Material 3105 1014	Material 3205 2008	
Material 3105 2008	Material 3205 7000	
Material 3108 1900	Material 3208 2902	

Approved as a printed version under UL File No. MH15511
Printed labels with print colors for UV book and flexo printing

White	Silver	Transparent
Material 3105 2008	Material 3205 1003	Material 3003 1005
Material 3105 1005	Material 3205 1004	
Material 3105 1000	Material 3205 2008	
Material 3105 2002	Material 2205 1900	
Material 2105 1900		

The certifications can be researched and reviewed on the Internet at www.ul.com under section **Online Certifications Directory**.

Extreme sports as a relaxation method

IT specialist races to success

Martin Berner, our IT networks specialist, took a 7-day-break from his every day routines and office work and climbed into the saddle instead. Joined by his team partner Alexander Lang he represented the Wölco AG Racing Team at the Trans Schwarzwald – a very special type of mountain bike race.

An impressive 130 teams and 210 individual racers embarked on the race, which began in Pforzheim. The seven legs of the race took participants through the Black Forest from north to south. The athletes had to overcome 557.7 kilometers and 14,800 height meters – quite a feat to accomplish for a hobby cyclist. Nonetheless, our Martin Berner (photo on the right) crossed the finish line in Murg-Niederhof with a time of 28:34.52,3. “It is an amazing feeling to master this kind of route. Well, I trained hard and I made it,” explained a thrilled Martin Berner. It goes without saying that everyone at Wölco AG is happy for our great athlete, who after completing the race is keeping our systems running with fresh enthusiasm. ■





QUALITY MANAGEMENT

With the implementation of DIN EN ISO 9001, Wölco AG laid the corner stone for a well-functioning quality management system as early as 1996. In 2003, the company expanded its system to ISO/TS 16949:2002. Compliance is audited by independent certification organization DQS (Deutsche Gesellschaft zur Zertifizierung von Managementsystemen= German Organization for the Certification of Management Systems) on an annual basis.

Priority one: customer satisfaction and benefits

One hundred days of service dedicated to quality



Bernd Mayer can look back on more than 25 years of experience in quality management. After career stints with major domestic and international conglomerates he is now in charge of Wölco AG's integrated management system.

Mr. Mayer, your entire career to date has been dedicated to quality management. Your most recent employment in the field spanned 15 years. What motivated you to leave this position and join Wölco?

Bernd Mayer > After such a long commitment to an interesting environment that included a variety of diverse assignments I wanted to change my professional routines and leave behind the familiar. I was intrigued by the opportunity to gain new experiences and build different relationships. In the past I always worked for larger corporations. My career path took me to three different employers and I spent two years in the U.S. At Wölco I am looking forward to working with interesting products and in new markets and with the related quality concepts. I am confident that my experience in quality management topics will be beneficial for the small but excellent company that Wölco is today.

What surprised you the most during your first 100 days with the company?

Bernd Mayer > Actually, I did not encounter many surprises; as I found many of the details I expected reaffirmed. Wölco is a solid company that addresses all QM issues in a reasonable manner and in compliance with the state-of-the-art. Consequently, it can talk to its large automotive clients eye to eye. Positive surprises came in the form of the friendly welcome, the forthrightness and the support of my new colleagues, staff and the management. At Wölco the communication and decision-making channels are very direct. This organizational structure fits the company, its size and its workforce. Lengthy debates are foregone in favor of tackling and handling the issues.

What did your first activities at Wölco entail?

Bernd Mayer > On my first day at work, Mr. Dessecker, our CEO, took me on a personal tour of the company to give me the opportunity to meet the people at Wölco and familiarize myself with the operation. During the very first

week we had an audit by a renowned automaker. That was very interesting and thrilling, given that I was in a position to get to know the entire company alongside the auditors and was able to have instant face-to-face discussions on numerous quality management issues. Furthermore, visits with a list of key accounts and suppliers were of course on the agenda with the objective of meeting our contacts and understanding the needs of our customers and the capabilities of our suppliers correctly. In summary that means that I had to identify the status quo in QM and generate experiences to be able to come up with a future strategy for the integrated management system based on my expectations.

Which upcoming challenges have you identified and which issues are you going to focus on over the next year?

Bernd Mayer > We will perform active quality work on the basis of our proven ISO/TS 16949 certified management system with the objective of becoming even better in all 3 pillars of our product quality: development, procurement and production. In partnership with everyone involved in the departments and at our suppliers' end we will position ourselves even more optimally in all of our core business processes. To achieve this, our approach to thinking and working will have to become even more efficient and Fit For the Future. By becoming consistently oriented towards benefits for the customer, customer satisfaction and our own company's success, I am building upon core elements such as value focus, transparency and perfection in our quality management.

Can your ideas be translated into real results?

Bernd Mayer > Knowing the Wölco I have come to know and experienced to date – definitely. And if things ever do become problematic or difficult, we will handle it the way I described it and as proven successful at Wölco: we won't do a lot of talking, we'll tackle the issues as a team, make decisions and take care of them. ■



Wölco.



Wölco Labeling Solutions celebrates its anniversary

One of the fastest growing companies in the U.S.

After a 10-year success story, the steadily growing specialist for labels and labeling technology has established itself as a strong player on the North American market.

Even prior to the incorporation of Wölco Labeling Solutions (WLS), Wölco AG had a number of clients in America. The Chief Executive Officer of Wölco AG Germany, Dieter Wölfle, did intensive research in the North American label market and asked the existing American customers for input. In 1998, the company decided to

open a subsidiary in the State of North Carolina; more specifically in Charlotte. It all began with a small team consisting of just 3 employees who covered sales and production. Thanks to the fact that the order volume grew steadily, a larger building had to be found only a short time later.



The big move took place on September 8, 2002. It was the day of the grand opening of the Rolf Wölfle Building. The new business complex in Mooresville was named for the founder of Wölco Germany. An additional production line had been installed. The plant, which boasts 1500 square meters (15,000 sf), houses the production, laboratory, sales department, administration, machines, service department and logistics under a single roof.

I M P R I N T

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A special showroom offers customers insights into the WLS product portfolio, which ranges from labels, die-cut components, thermal transfer printing systems to different dispensing and application machines.

Olaf Walter, General Manager of WLS, cites the integral, solution oriented and partnership based collaboration with our customers as well as our excellent products as keys to our success in the U.S. Wölco Labeling Solutions Inc. specializes in providing custom label solutions for automakers and the telecommunications industry. The majority of the labels are produced on UV letterpress and UV flexo printing machines.

Last year, WLS began to increasingly switch to digital printing. An investment into a digital printing machine now enables the company to easily deliver label solutions featuring variable printing data such as sequential bar codes, serial numbers or personalized labels.

Oktoberfest celebration with beer and brats

The big WLS anniversary celebration took place in September of this year at the company's headquarters in Mooresville, North Carolina. Customers and business partners were invited to enjoy a colorful blend of entertainment, information and music. German food reminiscent of the Oktoberfest in Munich, a seminar program that included the issuance of award certificates and a drawing for a race-bound grand prize ensured everyone had a great time. The lucky winner of the drawing will get to experience a thrilling ride as a co-pilot in a NASCAR race taxi.



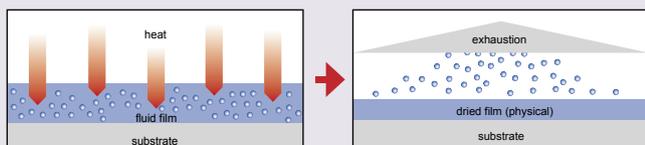


UV-curing ink systems for label printing

At Wölco, the origins of radiation hardening with ultraviolet light date back to the seventies. Rolf Wölfle, the founder of the company known as Wölco AG today, recognized the advantages of this drying method for label production early-on. One of the key benefits of using UV technology in production is that the printing ink has no chance to dry in the ink well, but hardens on the imprinted material in fractions of a second if UV light is applied. Other undisputed superior features are the excellent gloss and abrasion resistance it achieves in comparison to conventional printing ink. UV technology also offers health protecting benefits, given that UV printing ink usually does not contain any volatile solvents.

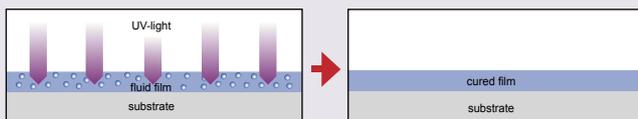
The process of using ultraviolet light for drying is defined as the hardening of a liquid substance (UV printing ink) under UV radiation. In printer jargon, the process is generally referred to as UV curing. To be able to better understand the UV curing process, it is critical to know the difference between the curing of conventional ink and UV cured substances:

Conventional – physical curing



In the conventional curing process, the printing ink is composed largely of pigments, resins and solvents. The solvent may be an oil that dries after a reaction to the oxygen in the air, which is the case with alkyd resin. It may also be a slightly volatile hydrocarbon such as petroleum. If water evaporates from latex paint the process is ultimately a physical curing process.

Chemical curing through UV radiation



In the chemical curing process, UV inks are converted to a solid state through a photo-chemistry process also called interlacing. This polymerization is triggered through the effects UV have on the UV printing ink.

To be able to fully understand the way this works and the properties of UV printing ink, one must take a closer look at the structure and reactive mechanisms of these UV curing materials. Simply put, UV printing ink consists of the components binding vehicles, pigments, photo initiators and additives. Two different methods of UV printing ink curing exist. The binding vehicle and the initiator used in the ink determine the interlacing method: radical or cationic

1. Radical reactive mechanism:

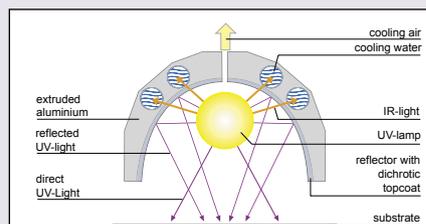
Acrylic substances in the form of monomers or pre-polymers (short-chain molecules) containing terminal double vehicles that interlace into long-chain polymers are used in the radical polymerization process. During this process, the binding vehicle assumes the functions of bonding, color transferability in the printing machine and pigment wetting. The most critical role to be handled by the binding vehicle is the generation of the hardened UV printing ink film. During the hardening reaction, short wave UV light divides the photo initiators into highly reactive radicals that react with other ingredients of the formula. Consequently, the photo initiators are one of the prerequisites for the creation of a cured film. The radicals react with the double vehicles of the binding vehicle composites. As a result, the vehicle itself becomes a generator of radicals and binds itself to other binding vehicle molecules. This process initiates a chain reaction during which over time more and more binding vehicle molecules combine into a three-dimensional network structure. This chemical reaction is called polymerization and occurs within fractions of a second.

2. Cationic reaction mechanism:

As a rule, the binding vehicle systems of cationic UV inks consist of cyclic epoxies. However, the photo initiators do not generate any radicals under UV radiation. Positively charged acids develop instead. These are called positive ions. When these positive ions attach themselves to binding vehicle molecules they transfer a positive charge, which is always further transferred. A chain reaction begins and a network is created. After it is complete, a hard UV printing ink film remains.

UV ink that cures through cationic reaction generally shrinks less than radically hardening UV systems. As a result, they have a strong impact on the adhesive properties on many polymer foils as they achieve better adhesion rates. Thanks to the critical post curing process the risk of migration and the development of odors of unhardened base materials is substantially reduced. Due to these properties, cationic process curing UV printing ink is frequently used in food-related applications.

An optimally performing UV system must be composed of numerous well coordinated components. To warrant the effective curing of UV printing ink Wölco uses highest quality UV drying equipment that is serviced continuously. The UV wave length range covers a spectrum of 200 nm – 400 nm. What we use is high energy short wave radiation in the realm between visible light and x-ray radiation. ■





Camera systems ensure high automation levels

Turning 3 into 1 – we keep an eye on everything

Our system technology department developed a fully automated labeling system for automotive tanks for a renowned automaker.

The complete system had to be installed into the existing production system while the line was running. Not only did the project require the installation of the actual core piece, the print & apply system with the Printronix TT Printer mandated for use by the plant, but also that of the product stopper with lifting units as well as the entire control technology and the software as well as the camera systems.

The task at hand was defined quickly: the wealth of information that already existed on numerous sub-components of the fuel tank had to be condensed into a label containing all of the information, which was to be attached to the fuel tank in a process secure manner.



Specifically this meant: three camera systems had to read the information of the three existing 2D DataMatrixCodes at defined locations of the fuel tank. This information goes in the programmable logic controller (PLC) for interim storage. The PLC forwards the code contents to the master computer via a profibus system and generates new printing data from the data received and the latest production data to ensure the clear and final marking of the pertinent fuel tank. The thus generated data is printed on the label in the print&apply system. A vertical applicator with two pivoting axes and a conveyor length of more than 500 mm applies the label to the designated position on the tank with absolute

precision. To do this, the tank has to be lifted slightly while it is passing through the production line and has to be stabilized during the application. Wölco's general standards for maximum attainable process security were consistently used throughout the actual printing dispensing process.

The machine is completely and conveniently operated via the existing operating panels. All I/Os were set up with the assistance of active field bus terminals, so that the use of additional hardware could be reduced to a minimum.

Consequently, we have provided the customer with a tracking & tracing solu-

tion and an integrated solution, which is reflected in the minimal hardware requirements and the concept's cost effectiveness. Ultimately, the expected automation level was implemented in combination with maximum process security – to the utmost satisfaction of the customer. ■



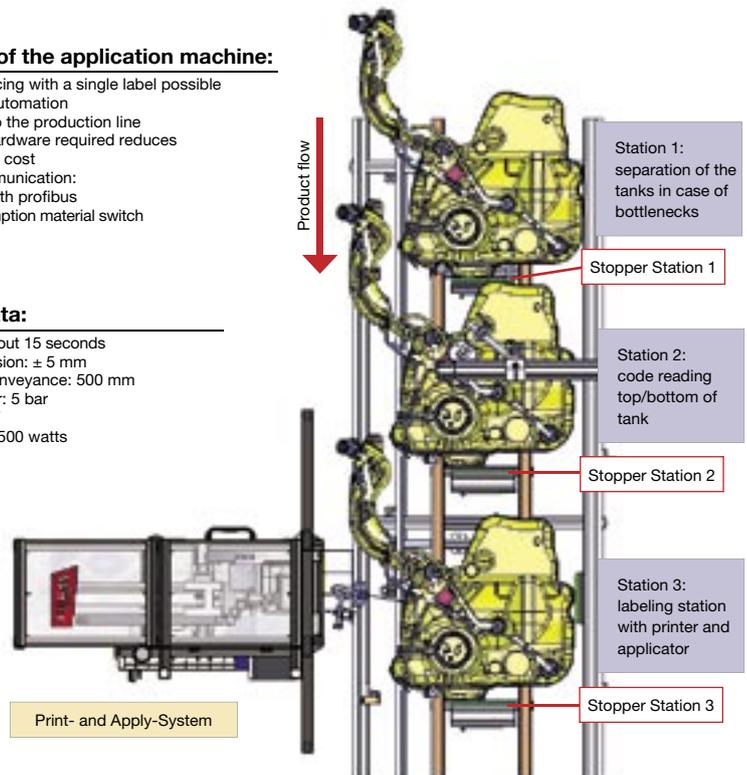
Schematic diagram of labeling

Parameters of the application machine:

- Tracking & tracing with a single label possible
- High level of automation
- Integration into the production line
- Minimum of hardware required reduces the investment cost
- Interface communication: PLC control with profibus
- Simple consumption material switch

Technical data:

- Cycle time: about 15 seconds
- Labeling precision: ± 5 mm
- Application conveyance: 500 mm
- Pressurized air: 5 bar
- Voltage: 230 V
- Rated power: 500 watts





Latest material generation is extremely stress resistant

Solvents do not stand a chance

Today, it would be hard to find any product not marked with a serial or batch number. To be able to mark products with variable data, customers are increasingly opting for the thermal transfer printing method.

This printing method transfers ink from an ink ribbon to the label material with the assistance of heat. High quality thermal transfer printing results are, however, contingent upon the use of premium materials. Given the wide selection of label materials and ink ribbons available, the choice is often difficult. Wölco subjects the supplies available on the market to tough quality checks to ensure their suitability for specific purposes and makes pertinent recommendations.

Perfectly matched!

Wölco now offers a new combination of materials for the labeling of machines or devices exposed to extreme stress due to friction or chemicals. Thanks to its innovative combination of acetone resistant label material and the acetone resistant ink ribbon WT2610, a high level of resistance against aggressive solvents can now be attained. This premium quality is achieved thanks to the perfect alignment of the two components. This makes this combination of materials especially suitable for industrial applications. In particular manufacturers who have to be able to depend



on the long sustainability of their labels when they are exposed to solvents, such as the automotive industry, chemical or electrical industry will reap the benefits of this innovation.

Economically secure and made for universal uses

Thanks to this high quality labeling solution, the labels can be directly applied to the product – no further processing is required. Additionally applied laminates that previously protected the prin-

ted images against aggressive solvents such as acetone, methyl ethyl ketone (MEK) or tough industrial cleaners have therefore become redundant. As a result, manufacturing is simplified, the processes are safer and costs are reduced. The adhesive material in matte white or silver adheres to powder coating and other hard to bond surfaces. The slightly elevated application of the adhesive makes this material a good solution even for surfaces with some structuring. ■

Technical Product Information



Sample label stick here

Please request
info@woelco.com