

# GUIDELINES FOR APPLICATION

The guidelines mentioned below have been created with the aim of providing basic information to the user with the methods of common application for UNIFOL&UNICAST products produced by Bes Reklam. This Warranty Procedure shall apply if the following guidelines are followed.

## STORAGE CONDITIONS

UNIFOL undertakes that the shelf life of its products shall be 2 years if the storage temperature is between 15°C and 25°C and the ambient humidity is between 40% and 60%.

The foil should be stored vertically or horizontally in a dry and cool environment by keeping its original packaging. Avoid keeping products close to vertical sunlight and high-temperature heaters.

In order to prevent size changes in the Carrier Paper and Foil and to create ideal storage conditions, the warehouse temperature should not exceed minimum 15°C and maximum 25°C, and maximum attention should be paid to keeping the humidity in the environment at 40-60% levels.

Some of it is used, that is, short-length products should be stored vertically or horizontally on specially prepared shelves, hangers and floors. Otherwise, it is recommended to keep it in its original nylon bag and box and not to touch the ground directly.

Avoid contact with the foil with bare hands. Skin oils, hand dirt and sweat may penetrate the foil and deteriorate the print quality. It is recommended to transport the opened foil with specially prepared gloves.

## AMBIENT TEMPERATURE IN DIGITAL PRINTING

The most important factor affecting the performance of digital printing machines is the physical ambient and environmental conditions. Ambient temperature should be between 18°C - 25°C and humidity should be between 40% - 60%. Even if the ambient temperature has reached 18°C, it shall take at least 60 minutes for the inks and material in the printing machine to become suitable. In order for your digital printing machines to perform effectively for UNIFOL products, you need to optimize the physical conditions. It should not be forgotten that if the machine and foil surface temperatures are very different from each other, possible problems such as foil blistering, waving and foliation may be encountered. The temperature of the product to be printed should be at the same level as the ambient temperature before it is used. In order to prevent problems caused by the cold-heat difference, especially in winter, the product to be printed should be kept in the printing room for at least 8 hours.

## INK DRYING PROCEDURE

UNIFOL&UNICAST recommends drying the printed material before lamination application by keeping it in an environment of 18°C - 25°C for at least 24 hours in order to avoid adhesion and separation problems. If the ink used consists of dense and dark colors, it is recommended that the waiting time be between 48-72 hours.

It is recommended not to coating the foil tightly around the bobbin after printing in Digital Printing machines with low drying capacity, and to keep it on a flat surface so that the ink-based solvent on the foil evaporates. Otherwise, Solvent components on the foil surface shall penetrate the adhesive layer of the material and reduce the level of adhesion. This shall adversely affect the UV resistance values of the product.

## USE OF UNBRANDED ( OEM ) INK

UNIFOL&UNICAST recommends the use of unbranded inks during printing only if the machine manufacturers give approval for conformity.

UNIFOL recommends installing the ICC Profile settings on the website on the appropriate machines to achieve optimum color and software settings.

If necessary, special ICC profile settings for UNIFOL & UNICAST printing foils can be requested from your machine manufacturer.

## APPLICATION TEMPERATURE AFTER PRINTING

Unless specified in the technical data sheets, UNIFOL&UNICAST products should not be applied below 10°C. It should be ensured that the temperature does not drop below 10°C within the first 24 hours after the application.

In order to get the most suitable result, it is recommended that the surface and ambient temperature be between 18°C and 25°C.

Applications in cold weather conditions below 18°C shall cause the material to harden and the adhesive to stick less.

It is likely that the material shall stretch and become curved by bending during applications to be performed in weather conditions above the mentioned temperature.

It is recommended to keep it at the ambient temperature in the application area for at least 24 hours in order to reach the maximum level of adhesion values of the applied vehicle.

Extreme air temperature changes should be carefully avoided in the application environment so that the material does not lift and throw off, especially from angular and 3D surfaces. In addition, the foil should not be stretched excessively and should not be pulled.

For applications below 10°C, please contact UNIFOL&UNICAST.

## POST-PRINTING STORAGE CONDITIONS

In order to get maximum efficiency out of UNIFOL products, lay the foil on a flat surface after printing and allow it to dry for 24 hours. During packaging and wrapping, keep your printed roll up to the moment of application by wrapping it in the thickest possible roll with the print facing out.

# APPLICATION AND REMOVAL METHODS

## WET APPLICATION

Wet applications are generally recommended for large surface applications. For optimum results in wet application, the recommended ambient temperature is 18°C -25°.

UNIFOL recommends the use of transfer tapes with medium adhesion values in such applications.

After the liquid used during the application is kept for a sufficient time and dried, if transfer tape is used, the transfer tape should be carefully removed from the surface at an appropriate angle.

The newly performed application should be left for at least 24 hours in the application area to ensure that the remaining moisture on the surface is lost. Otherwise, the foils may come off during dismantling.

Wet applications should be used on clean, smooth and non-porous surfaces.

## DRY APPLICATION

It is ensured that the surface on which the foil shall be applied is plastered with a squeegee, starting from the corners or upper parts, depending on preference. The carrier paper is separated from the foil before or during application.

UNIFOL recommends the use of 2404 transfer tape with medium adhesion values in applications requiring transfer tape.

The transfer tape is pulled away from the foil slowly at an appropriate angle in applications made with the transfer tape. Finally, with the pressure to be applied on the adhered foil, it is ensured that the foil fully adheres to the surface.

## LAMINATION APPLICATION

For a longer life of the printed Foil, lamination application is recommended. With the laminated foil, the printed product becomes brighter, more vivid and resistant to physical factors.

The UV protector on the surface of the Lamination Foil helps the product to stay in the first day's print quality and brightness for a longer period of time.

UNIFOL&UNICAST recommends the use of lamination foils in order to create the desired effect (gloss, transparency, matte, etc.) on the foil. UNIFOL&UNICAST Lamination foils protect the foil surface against the harmful effects of the sun, thanks to the UV components in its structure.

UNIFOL requires the use of UNIFOL branded products as Lamination Foil in order for its products to be under warranty.

Please contact the UNIFOL technical team to clarify the conformity of the UNIFOL Laminating Foil to be used.

Due to the structure of the foil used, it is recommended to apply the lamination on it in the following order.

- It is recommended to laminate the products in the monomeric series with the transparent Foils in the Monomeric product group.
- It is recommended to laminate the products in the polymeric series with the transparent Foils in the Polymeric product group.
- It is recommended that the products in the Cast series be laminated with the transparent Foils in the Cast Series.

## APPLICATIONS ON GLASS SURFACES

Glass and other surface cleaners may leave residues between the material and the surface that shall reduce the adhesion level of the foil. The glass surface can be cleaned with a mild detergent and pure water before applying the foil. Isopropyl Alcohol can be used on glass surfaces that require extra cleaning.

UNIFOL does not take responsibility for any breakage or damage that may occur during the applications to be performed on glass surfaces. For more detailed information about glass surface applications, you can contact UNIFOL.

In case of traces, darkening and moiré etc. encountered in the aqueous applications of water-based Acrylic product groups 7203 and 7305, wait between 24 and 48 hours

and wait for the water remaining between the Glass surface and the Foil to dry. The necessary sun or ambient heat shall allow the water between the surface and the foil to dry, thus eliminating the previous darkening and similar problems.

Our Solvent Acrylic Based product groups 7802-7807 are recommended for those who do not want to wait for this period.

Thanks to the special Solvent Acrylic adhesive in its content, it prevents any trace, moire or darkening between the surface and the foil. And it gives you faster results.

## **MARINE VEHICLES AND BOAT APPLICATIONS**

The series containing water-based adhesive in marine vehicles and boat applications are not under UNIFOL&UNICAST warranty; if UNICAST 9540-9540UF Cast Series is laminated with UNICAST 9542 Transparent Foil, it is included in the warranty.

UNIFOL warranty Procedures are by no means valid on Stainless steel surfaces.

## **PROCEDURES OF REMOVAL**

In order for the foils to be removed from the surfaces, it is recommended that the ambient temperature be at least 18°C - 25°C.

The foil is removed from the applied surface with a sharp object from one corner and slowly pulled from the surface at an appropriate angle. A heat gun should be used to facilitate the removal of the foil.

For more detailed information about the above issues, please contact UNIFOL Head Office.

## **GENERAL WARRANTY CONDITIONS OF UNIFOL CAR COATING SERIES AND UNICAST CAST CAR COATING SERIES**

UNICAST “Cast Vehicle Coating Series” has a comprehensive warranty for vehicle applications in 9500-9600 - 9700 - 9800 and UNIFOL 7600 7100 and 9382 series. It guarantees that UNICAST Vehicle Coating series shall not be deformed such as cracking, splitting, peeling under normal weather conditions within the specified period. The warranty procedure is valid for vertical applications, when UNICAST&UNIFOL application guidelines are followed and with the following conditions.

It has been determined by tests that horizontal applications shorten the life of the foil very much. Horizontal applications are not under UNIFOL&UNICAST warranty.

The warranty provided covers manufacturing defects (Product problems caused by raw materials, Short roll, wrong product, wrong label, etc.).

In harsh natural conditions, minor color changes, loss of brightness, slight bends on the graphic edges may occur. These do not affect the foil performance.

UNIFOL provides Cast products warranty against material quality and manufacturing faults, provided that they are kept, printed and applied correctly as stated in the product technical information bulletins.

UNIFOL&UNICAST is obliged to compensate the damage up to the amount of product used by the end user, either through the dealer from which the product was purchased or directly, in case the Vehicle Coating and Cast product series do not meet the promised effective performance life.

Under no circumstances, other operating costs such as Coating, dismantling, printing, vehicle waiting costs, etc. shall not be considered within the scope of warranty and shall not be subject to damage compensation.

UNIFOL shall not accept responsibility for errors arising from the user's choice in determining the suitability of the product for its intended use.

UNIFOL&UNICAST shall not accept any responsibility for the direct or indirect usage errors during the application or the defects arising from the applications to be made by unqualified persons. Any express or implicit indemnity claim that may arise out of the scope of this warranty is not subject to interpretation.

UNIFOL does not accept any responsibility for possible damages that may arise from the applicator in any case.

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The complainant is obliged to deliver the material samples subject to the complaint to UNIFOL address to be tested in UNIFOL laboratories. In addition, the complainant can only have the material tested by UNIFOL approved Laboratories in order to prove the claim that is the subject of the complaint.

The Lot number on the product or the Label numbers on the surface of the Box should be submitted together with the material subject to the complaint.

UNIFOL product warranty shall not cover possible damage to the surface on which the product is used, regardless of product performance.

Warranty coverage for errors to occur shall be evaluated only on a case-by-case basis and individual complaints cannot be generalized.

Applications in urban and industrialized areas may lead to a decrease in the durability of the product and material surface due to acid rain, polluted air and various atmospheric events.

Damages caused by the situations mentioned above are not covered by the warranty.

UNIFOL usage procedures and conditions should be fulfilled in order to get maximum efficiency from UNIFOL products and to ensure that the User's possible damages are within the scope of the Warranty. In addition, in order for the product to be under warranty, the Lot number on the product or the Label numbers on the surface of the Box should be submitted.

## ***WARRANTY IN INDIVIDUAL AND FLEET APPLICATIONS***

UNIFOL & UNICAST Vehicle Coating series are recommended for use in individual and fleet vehicles.

UNICAST Cast Vehicle Coating Series ( 9500-9600-9700-9800) can be used on flat, riveted, corrugated, spliced, twisted, grooved and 3D surfaces.

UNIFOL Vehicle Coating Series ( 7100-7600-9382 ) are recommended for use on Flat and Slightly Curved 2D Surfaces .

In very deep grooves (the situation where the foil shall be stretched excessively), it is recommended to cut the foil or apply the foil to the surface using appropriate techniques. You can contact UNIFOL & UNICAST technical team for appropriate Vehicle Coating Techniques and product selection for the surface to be applied.

UNIFOL & UNICAST application bulletins should be followed during application. In order to ensure that the applied foil adheres well to the surface, the foil should only be shaped and applied to the surface with a heat gun without stretching it. If the foil is to be stretched, all areas of the foil surface are heated homogeneously and then the required stretching should be done and the end points of the foil should be sealed

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with a heat of approximately 100°C for the final result. (The heat used may vary according to the Ambient Temperature.)

The metal surfaces on which the application shall be made should be purified from particles such as dirt, oil, resin, dust, mud that shall prevent the adhesion of the foil, and the surface should be cleaned very carefully. Before the application, the printed foil surface should be dry.

Warranty does not apply to stainless steel surfaces.

UNIFOL&UNICAST application guidelines should be taken into account for application procedures.

## **PRODUCT COMPATIBILITY AND PERFORMANCE**

For the UNIFOL&UNICAST product most suitable for the project to be implemented, please contact the UNIFOL Technical support department. UNIFOL&UNICAST is not responsible for the damages that may occur in case of using the materials of other Foil manufacturers and UNIFOL&UNICAST products together.

## **POSSIBLE DAMAGES TO SURFACES**

UNIFOL&UNICAST is not responsible for the non-integrity of its products with the applied ground and for indirect or direct damages that may occur during the application lifetime and dismantling.

## **USE OF UNBRANDED INK**

UNIFOL UNICAST excludes the use of unbranded and non-original inks from the warranty. It is not responsible for any damage that may occur.



## **Compensation**

In the event that the UNIFOL&UNICAST product series does not meet the promised effective performance life, it is obliged to compensate the damage up to the amount of the product used by the end user, either through the dealer from which the product was purchased or directly. Other costs (labor, ink, consumables, printing, disassembly, cleaning, operation expenses, etc.) shall not be included in the calculation of compensation for possible damages.

UNIFOL Technical Team reserves the right to investigate in case of compensation for damages that may be subject to compensation. UNIFOL replaces or pays for faulty materials.

All notifications subject to the complaint should be forwarded in writing to the relevant departments of UNIFOL. Claims for compensation should be submitted to UNIFOL or the local dealer within 30 days of the fault finding. Otherwise, UNIFOL reserves the right to process the complaint or not.

Desert, tropical climate and horizontal ground applications shall reduce the warranty period or are considered out of scope as the case may be.

The application date, material lot number, application method, sample, photograph, etc. from the product that is predicted to be defective should be transferred to the relevant units.

All investigations shall be carried out and finalized by the Technical Team in UNIFOL & UNICAST Laboratories and in-house.

In no way, suggestions, recommendations, tests, evaluations, etc. opinions of third parties and institutions shall not be considered within the scope of warranty.