FOLACOAT / FOLACOMP – THE SYSTEM SOLUTION FOR INLINE COATINGS

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1. OVERVIEW OF SYSTEM COMPONENTS – PRODUCT DESCRIPTION

High-quality packaging concepts require coating plates, which meet the current requirements in the inline varnish in offset printing. In addition to functional protective coating for the faster post-press processing, special finishes for promotional purposes are in the focus today. Folacoat coating plates fulfill these requirements in particular.

Unlike rubber printing blankets, the substrate of the Folacoat coating plates consists of dimensional stable polyester film resp. polyester film laminates.

These substrates provide a coating transfer in register and assures multiple uses with high number of impressions. The coating carrying polymer layer will be applied, with the highest precision, to the polyester carrier, based on latest coating technologies. The polymer layer is designed to transfer coatings (and not like printing blankets which are mainly designed to transfer printing inks). Back trapping of ink can be waived as far as possible.

Folacoat coating plates are suitable for water-based and UV coatings and provide the best coating results. They are highly resistant to the substances contained in these coatings and the corresponding cleaning agents.
In some cases, we equip the Folacoat coating plates with an additional slip film, which simplifies subsequent processing with a CAD cutting system. Furthermore, the slip film provides optimum protection against mechanical damage to the surface during transport or storage.

With our compressible Folacomp underpackings, Folacoat coating plates form a high-performance coating system that meets the highest demands on coating quality and productivity. Folacomp underpackings provide the basis for smooth machine operation and thus protect the roller bearings of the printing press.

The contours of non-coating areas of Folacoat coating plates must be cut to enable manual lifting of the knock-out areas. We would like to point out that „positive" coating spots should not be too small and have a side length of at least 1 cm (.4").

The following coating plate types are available with a slip film for easy processing on cutting plotters with cut visualization:

Folacoat Plus: Folacoat Plus is a universal coating plate with a double-layer carrier for high dimensional stability.
Folacoat Extreme: A universal coating plate with a low-swell polymer layer. In addition to water-based and UV coatings, the Folacoat Extreme can be recommended in H-UV and LED UV applications.

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Folacoat Ultra-T: A dimensionally stable coating plate with a thickness of 1.95 mm, equipped with a polymeric top layer for perfect coating transfer. This plate is suitable for dispersion and UV coatings.
Folacoat Diamond: A coating plate for best gloss results in UV high-gloss applications. This plate is also suitable for use with water coatings.
Folacoat Pearl: The enlarged surface of the Folacoat Pearl eases the transfer of matt or soft-touch coatings. This plate is also suitable for the use with water-based and UV coatings.
Folacoat Flex: The compressible Folacoat Flex coating plate was developed to achieve optimum coating transfer independent of different substrate qualities and coating types. In addition to the carrier, this plate consists of a compressible foam layer and the well-known Folacoat Plus polymer for the coating transfer. **The Folacoat Flex is currently only suitable for the transfer of water-based coatings**.

The following coating plates have received a polymer layer with optimized sliding properties:

Folacoat Basic: Economical coating plate with a single-layer polyester carrier. Folacoat Basic is suitable for use with water-based and UV coatings. The optimized top layer prevents ink build-up when using special colors and low-migration inks.

Folacoat Advance: Economical coating plate consisting of a single-layer polyester carrier and a soft polymeric layer. The Folacoat Advance is suitable for use with water-based and UV coatings. Especially with varying substrate qualities good results can be achieved.

Self-adhesive transparent Folacoat polymer as a functional layer for application on polyester films. Ideal for smaller coating areas and short production runs. **The Folacoat Easyspot is recommended for the transfer of water-based coatings only.**

Folacoat Easyspot: Self-adhesive transparent Folacoat polymer as a functional layer for application on polyester films. Ideal for smaller coating areas and short production runs. **The Folacoat Easyspot is recommended for the transfer of water-based coatings only.**

With regard to available thicknesses and/or available dimensions, you will find extensive information on the above qualities in our download area on our website www.folex.de.

2. COATING FORM PRODUCTION ON CAD CUTTING SYSTEMS

Processing of Folacoat Coating plates on a cutting plotter offers the many advantages:

The distortion factor is taken into account in the software of the CAD cutting system. Furthermore, a plotter cuts much faster and more accurately. In addition, a cutting system offers the possibility of cutting more complicated forms, e.g. circles, semicircles, etc., which is difficult to carry out manually.

The surface characteristics of our coating plates with a slip film, which also provides protective functions, supports the smooth sliding of the plotter head on the surface of the coating plate. This prevents damage to the coating form or damage to the cutting plotter due to jolty guidance of the cutting blade. Additionally it delivers cut marks to visualize the layout of the coating form.

The cut of the severed film is highly visible and reduces the risk of missing cut-outs in the polymer layer. After cutting and removing the slip film, it is advisable to clean the polymer surface with a soft cloth and water to remove any impurities or adhesive residue from the slip film.

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Please refer to the respective data sheet available for each product for the cutting depth. It is definitely achieved when a fine white line appears on the back of the coating plate. Preliminary tests should be performed to avoid damaging the carrier film. Please pay attention to the data sheet of the product to be processed.

After cutting the non-coating areas can be removed (stripping). For larger areas to be stripped, these should be cut into strips of max. 5 cm width. This is important to prevent damage of the carrier. Afterwards the polymer can be lifted in one corner by using the Folacoat lifting tool.

The polymer layer should be removed slowly so that the carrier film does not lift, which could lead to deformation of the carrier material. (See also Information "Vorbereitung/Preparation")

The removed polymer can be disposed of with household waste, as it is harmless to the environment. The coating form is completed when all non-coating areas have been removed.

3. APPLICATION OF FOLEX COATING PLATES

For information on the use of coating forms in the coating unit of sheet-fed printing presses, please refer to the operating manuals of the printing press manufacturer.
Depending on the machine type, it may be necessary to improve the damping properties of the coating cylinder set-up with regard to the hard polyester base film during machine operation.
Especially for printing presses with chambered doctor blade systems we recommend to optimize the damping properties of the coating cylinder. The Folacomp underpacking provides the compressible element for best printing press performance and is an important part of the FOLEX system solution for the coating unit.

4. CLEANING OF FOLACOAT COATING PLATES

We recommend a mixture of petroleum ether/water in a ratio of 1:1, a mixture of isopropanol/water in a ratio of 1:1 or lukewarm water as suitable cleaning agents for Folacoat Coating plates. In principle, slowly evaporating or re-greasing cleaning agents should not be used. For further information please refer to our information sheets "Folacoat Cleaner" or "Folacoat UV Cleaner".

5. STORAGE OF FOLACOAT COATING PLATES

All Folacoat coating plates should be stored in small stacks in their original packaging (this avoids pressure from above) until they are being processed. The recommended storage period for new coating plates is one year. The ideal storage temperature is between 18-22°C (64-72F) at a relative humidity of 50-55%.

After cleaning and drying, the plate can be stored for repeat jobs, making sure that the polymer is in a clean, dry condition. Subsequent storage should be as suspended as possible

The Folacoat plate can be stored for repeat jobs after proper cleaning and drying. It is important to achieve a clean and dry polymer surface before storage. It is recommended to wrap the coating plate in a polyethylene film to prevent dust settlement on the surface of the polymer. The clean and dry Folacoat coating plate can be stored vertically in a rack or it can be rolled-up. Dust protection is important in all cases.

The Folacoat coating plates can also be rolled for storage, protection against dust is important in this case, too.

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6. ADVANTAGES OF FOLACOAT COATING FORMS

- Highly dimensional stability due to polyester film
- A double layer coating plate has a carrier made of two laminated polyester films. Even if the upper carrier film is cut, the lower carrier remains undamaged and is strong enough to prevent the coating form to tear.
- Reusable, long production runs.
- The coating plate can be produced outside the press, avoiding expensive press downtime.
- The preparation time for a coating plate is, e.g. for Speedmaster CD 102, approx. 1 - 1.5 hours based on CAD-plotter production.
- The dimensionally stable polyester film improves the accuracy through register punch
- Due to the microrough surface finish, a better gloss level can be achieved than with coating transfer of a rubber blanket or a photopolymer plate
- Due to the polymer's water-friendly surface, the ink build-up during wet-on-wet production is considerably less than with a rubber printing blanket whose surface is intentionally designed to be colour-friendly. This reduces the need for coating form cleaning, which is a rare occurrence, and reduces time-consuming machine downtimes. Customers report that they only had to clean the coating plate after approx. 30,000 or more sheets.
- There is no need to re-tighten the coating plate. This reduces expensive machine downtimes

If requested, our Folacoat coating plates can also be supplied with a bar. Please contact your dealer.

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