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## TUBILUX FFB

<b>Characterization</b>	Special adhesive for transfer printing with metallized PES films
<b>Chemical Structure</b>	Compound based on acrylates
<b>Supplied Form</b>	White, shiny, highly viscous paste
<b>Ionic Character</b>	Anionic
<b>pH Value</b>	7.6 – 9.5
<b>Storage</b>	In a cool and dry place in originally closed containers between + 5 °C and + 40 °C. We recommend not exceeding a storage time of 12 months. Protect from frost and excessive heat. After the impact of temperatures around die freezing point irreversible changes occur. The product has to be stirred well before taking it out of the drum. Open drums have to be reclosed well.

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The above given values are product describing data. Please consult the 'delivery specification' for binding product specifications. Further data about product properties, toxicological, ecological data as well as data relevant to safety can be found in the safety data sheet.

### Properties

TUBILUX FFB was especially developed for transfer printing with metallized PES films.

TUBILUX FFB is a film adhesive free from PVC and phthalate which produces very soft, shiny film prints.

The fastness level that can be achieved depends on the following parameters:

- type and quality of fabric (elastic, stiff, water-repellent, hydrophilic, finished, harsh, soft)
- printing method / application amount
- transfer parameters for ironing press / transfer calender
- film quality (hard or soft release, thick or thin embossing layer)

### Application Procedure

#### Textile Substrates

In normal textile printing the film printing process can be applied to nearly all kinds of textiles, particularly flat woven fabrics which are sufficiently heat-resistant.

The achievable fastness level of printing effects made with metallized polyester films mainly depends on the quality of the metal film. Special films are stable to washing at 30 °C, delicate laundry; dry cleaning is possible according to the F-standard.

## Preparation of Printing Paste

TUBILUX FFB is a special one-component adhesive paste, suitable for rotary, flat screen and screen printing.

The print paste viscosity has to be adjusted to the type of printing equipment. If a thickening becomes necessary, this can be easily done by adding a synthetic thickener. The viscosity can be decreased by simply adding water (10 % at the most) or better by a careful drop by drop addition of a diammonium phosphate solution (1 : 2).

The fastnesses can be increased if necessary by adding 10-15 g/kg TUBIFIX ML 55.

Corrections as described have to be effected while stirring very cautiously since a partial heating of the paste leads to a premature polymer reaction which may impair the running properties or block the screens in the subsequent paste processing.

## Printing Process

Independent of the printing system employed (rotary, flat screen or hand printing) an even surface print on the fabric is necessary to guarantee a sufficient adhesive contact to the film.

TUBILUX FFB can be easily removed from screens and doctor systems with cold water. It should be avoided that left-over adhesive dries in on the screens.

## Drying

The drying conditions must be adjusted in a way that the applied adhesive forms a film which is stable to mechanical strain. A premature curing of the thermal adhesive caused by too high a drying temperature (above 150 °C) or too long a drying time at temperatures between 110 - 150 °C must be avoided. Experience has shown that drying temperatures ranging from 100 - 120 °C are optimal.

## Transfer Process

The transfer of the film is effected either continuously by means of transfer calendars or discontinuously with ironing presses. The printed side of the fabric has to be joined to the matt side of the film.

Transfer press:                    170 - 200 °C, 20 - 60 seconds contact time  
    150 - 500 p/cm<sup>2</sup> pressure

Transfer calender:                170 - 200 °C, 30 - 60 seconds contact time  
    A constant pressure of the revolving felt cloth must be ensured. Usually, a medium to high tension of the felt cloth is applied.

## **Releasing the Shiny Printed Areas and Removing the Carrier Film from the Textile Substrate**

After being completely cooled down, the carrier film is removed from the fabric releasing the coloured lacquer layer on the printed areas.

The usual embossing films of several manufacturers can be used as films. Their suitability must be checked before use.

## **Recommendation for Use**

We basically recommend carrying out pre-trials to check the suitability of the print pastes with the substrates to be used in terms of wetting, adhesive capacity, fastness properties, thermostability and processing parameters prior to starting production and recommend checking them also during production.

**We reserve the right to modify the product and technical leaflet.**

**Our department for applied technique is always at your service for further information and advice.**

Our technical advice and recommendations given verbally, in writing or by trials are believed to be correct. They are neither binding with regard to possible rights of third parties nor do they exempt you from your task of examining the suitability of our products for the intended use. We cannot accept any responsibility for application and processing methods which are beyond our control.

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