



TECHNICAL DATA SHEET

UVALUX[®] LED U5L-8CT51FCM Coldfoil Adhesive

FCM Coldfoil Adhesive for LED-UV Offset and LED-UV Letterpress, not tinted

CHARACTERISTICS

With the UVALUX[®] LED U5L-8CT51FCM Coldfoil Adhesive we present a LED-UV curing adhesive for FCM applications, especially for printing of labels and packaging for food in offset- or letterpress printing (FCM=Food Contact Material).

It has been designed specifically for processing with energy saving LED-UV units from all market-common suppliers with the wavelengths 385 or 395nm but can also be cured with traditional mercuryvapor-UV or LE-UV/H-UV lamps.

UVALUX[®] LED U5L-8CT51FCM is not dyed (transparent) and due to its low tack it is particularly suitable for reel-fed applications.

TECHNICAL DATA

Drying/Curing	UV-LED (385 / 395nm) - UV-Hg (Mercury Vapour) - H-UV
Substrate	Paper Uncoated - Paper Coated - Paper Plastic Coated - Film
Printing Process	Offset Sheet-Fed - Offset Web-Fed - Letterpress
Formulation	Suitable for FCM applications - VOC-free - Formulated without mineral oil - Non-DFC
Press Performance	Sharply Printed Edges - Good Ink-Water-Balance - High Reactivity
Surface Properties	Adhesion Optimized - Not tinted
Application	Folded Box - Flexible Packaging - Self Adhesive Labels

UVALUX LED U5L-8CT51FCM Kaltfolienkleber

12/2025-UVALUX LED U5L-8CT51FCM Kaltfolienkleber-23

The information contained in this document (the "Product Specification") is based on our present knowledge. They do not exempt the processor or user from carrying out its own tests. Properties of the product going beyond the above-mentioned specifications and/or suitability for a specific purpose cannot be derived from the product specification and are not owed. Any existing legal provisions and regulations concerning the handling and use of the products must be observed by the processor or user of our products. We expressly point out that the owed quality of our product is measured exclusively on the basis of the properties warranted in this document; the fulfillment of additional legal objective quality requirements is not owed. By ordering our product without objection, being aware of this product specification, you agree to it.



TECHNICAL DATA SHEET

UVALUX[®] LED U5L-8CT51FCM Coldfoil Adhesive

FCM Coldfoil Adhesive for LED-UV Offset and LED-UV Letterpress,
not tinted

End Application	Food - Cosmetics - Pharmaceuticals
-----------------	------------------------------------

Market	Labels - Packaging
--------	--------------------

Conformities	Switzerland, 817.023.21 - German Ink Ordinance
--------------	--

PACKING UNITS

+ 1 kg plastic can (black)

TECHNICAL SERVICE CENTER

Kindly note that we are ready at any time for competent technical application support on your site. Please contact our technical service centre for printing inks:

Ink-Service@Zeller-Gmelin.de
Tel: +49 7161 802-279

ADDITIVES

W963 UV Wash Up with Lemon Smell

Suitable for cleaning inking systems, sleeves, plates, blankets, etc.

Not approved for automatic washing units.

Before starting printing, the washing agent must be completely dried off, otherwise the printing behaviour may be impaired.

Remark:

The addition of any additive might change the overall characteristics of the printing ink.

STORAGE

UVALUX LED U5L-8CT51FCM Kaltfolienkleber

12/2025-UVALUX LED U5L-8CT51FCM Kaltfolienkleber-23

The information contained in this document (the "Product Specification") is based on our present knowledge. They do not exempt the processor or user from carrying out its own tests. Properties of the product going beyond the above-mentioned specifications and/or suitability for a specific purpose cannot be derived from the product specification and are not owed. Any existing legal provisions and regulations concerning the handling and use of the products must be observed by the processor or user of our products. We expressly point out that the owed quality of our product is measured exclusively on the basis of the properties warranted in this document; the fulfillment of additional legal objective quality requirements is not owed. By ordering our product without objection, being aware of this product specification, you agree to it.



TECHNICAL DATA SHEET

UVALUX[®] LED U5L-8CT51FCM Coldfoil Adhesive

FCM Coldfoil Adhesive for LED-UV Offset and LED-UV Letterpress,
not tinted

Optimal storage conditions:

The optimal storage temperature is 20°C. Higher storage temperatures reduce the shelf-life.

Remarks:

- protect from frost
- store in a cool and dark place
- stir or shake well before use
- can should be closed immediately after usage

Warranty:

If the products are stored properly, we warranty the product performance for a shelf life of 6 months from the date of delivery.

PRACTICE REMARKS

Printing Materials

We recommend using ester and ketone resistant rollers (EPDM-material). The inking roller, rubber blanket and printing plate have to be resistant against UV-inks and UV-detergents (see manufacturers instructions).

Process description coldfoiling

Cold foiling is procedure where a foil is transferred to a substrate by means of a special adhesive. A UV-curing adhesive is printed using a regular printing unit. Then the foil is laminated onto the substrate. The foil image remains only where the adhesive has been printed. Excess foil is stripped off with the carrier material. The foil must be suitable for the application, so the adhesive can be cured through the foil (UV transmissible). Suitable printing inks for overprinting the applied foil: UVALUX[®] U81

Adhesive lay-down

If too much glue is applied it could be squeezed outside the image area during application of the foil. This would result in poor print definition and edges which are not sharp. In extreme cases even the carrier film can be torn apart. Insufficient glue application would lead to poor removal of the metallised layer from the carrier film resulting in a patchy print.

Running the adhesive on a cold machine can lead to sensitive troubles because of the adhesive's high tack. Therefore make sure to apply the adhesive always on an operationally warm machine.

UVALUX LED U5L-8CT51FCM Kaltfolienkleber

12/2025-UVALUX LED U5L-8CT51FCM Kaltfolienkleber-23

The information contained in this document (the "Product Specification") is based on our present knowledge. They do not exempt the processor or user from carrying out its own tests. Properties of the product going beyond the above-mentioned specifications and/or suitability for a specific purpose cannot be derived from the product specification and are not owed. Any existing legal provisions and regulations concerning the handling and use of the products must be observed by the processor or user of our products. We expressly point out that the owed quality of our product is measured exclusively on the basis of the properties warranted in this document; the fulfillment of additional legal objective quality requirements is not owed. By ordering our product without objection, being aware of this product specification, you agree to it.



TECHNICAL DATA SHEET

UVALUX[®] LED U5L-8CT51FCM Coldfoil Adhesive

FCM Coldfoil Adhesive for LED-UV Offset and LED-UV Letterpress,
not tinted

Foil Characteristics

Foils with easy release from the carrier film enable optimum transfer, especially with high press speeds. They are ideal for use on full coverage designs. Foils with lower release properties from the carrier film (more firmly attached, harder to remove) enable sharper foiling, especially with fine lines and halftone work. However there is an increased risk of incomplete foil transfer.

Fountain Solution

Approved fountain solution parameters:

a) ph-value: 4,8 - 5,2

b) Water hardness: 9 - 12° dH

We recommend the use of temperature controlled ink ducts and fountain solution.

Preliminary Tests Recommended

Before beginning to print we recommend practice oriented pretests on your substrate, in order to test the desired characteristics of the finished product.

MARKING

Marking according to EC legislation:

Our inks are classified and marked according to EC legislation and the German "Gefahrstoffverordnung" (German dangerous substances regulation).

The material safety data sheet (MSDS) is available on request.

MISCELLANEOUS

Available Variants

UVALUX[®] U5L-8CY51FCM: Yellow dyed

UVALUX[®] U5L-8CK51FCM: Grey dyed

UVALUX[®] U5L-8CT51FCM: Transparent (not dyed)

DECLARATION OF COMPOSITION AND PRODUCT DECLARATION

UVALUX LED U5L-8CT51FCM Kaltfolienkleber

12/2025-UVALUX LED U5L-8CT51FCM Kaltfolienkleber-23

The information contained in this document (the "Product Specification") is based on our present knowledge. They do not exempt the processor or user from carrying out its own tests. Properties of the product going beyond the above-mentioned specifications and/or suitability for a specific purpose cannot be derived from the product specification and are not owed. Any existing legal provisions and regulations concerning the handling and use of the products must be observed by the processor or user of our products. We expressly point out that the owed quality of our product is measured exclusively on the basis of the properties warranted in this document; the fulfillment of additional legal objective quality requirements is not owed. By ordering our product without objection, being aware of this product specification, you agree to it.



TECHNICAL DATA SHEET

UVALUX[®] LED U5L-8CT51FCM Coldfoil Adhesive

FCM Coldfoil Adhesive for LED-UV Offset and LED-UV Letterpress,
not tinted

The UVALUX[®] LED U5L-8CT51FCM Coldfoil Adhesive is specially formulated for FCM applications, i.e. for printing on the outside of food packaging or food contact materials (indirect food contact, Non-DFC). Direct contact of the packed content with the printed side must be avoided.

General Requirements

The UVALUX[®] LED U5L-8CT51FCM Coldfoil Adhesive meets the following general requirements:

- + EuPIA Exclusion Policy
- + Heavy metal limits laid down in the European packaging and packaging regulation (EU) 2025/40 (replacing directive 94/62/EC) and TPCH (former CONEG).
- + Directive 2002/95/EC (RoHS), Directive 2011/65/EU and Directive 2015/863/EU (RoHS 2).
- + Formulated without free Bisphenol A or raw materials based on Bisphenol A (BPA-NI).
- + Formulated without the photoinitiators ITX, 369, TPO, 379 or Benzophenone.
- + No raw materials are used which are classified as CMR 1A & 1B, PBT (PBT pollutants are chemicals that are toxic, persist in the environment and bioaccumulate in food chains), vPvB (Substances that are potentially very persistent and very bioaccumulative) or endocrine disruptors (hormonally active agents).
- + We avoid the use of SVHC substances. Unfortunately the reclassification of a substance may result in the presence of SHVC substances in our formulations at concentrations >0.1wt%. Such rare cases are clearly highlighted in our material safety data sheets.

DIN EN ISO certification

The production site of Zeller+Gmelin / Germany is certified according to DIN EN ISO 9001:2015 and DIN EN ISO 14001:2015.

Requirements for food packaging or food contact materials

The UVALUX[®] LED U5L-8CT51FCM Coldfoil Adhesive is formulated for the production of food packaging and food contact materials. The following requirements can be met, provided that the processing is carried out

UVALUX LED U5L-8CT51FCM Kaltfolienkleber

12/2025-UVALUX LED U5L-8CT51FCM Kaltfolienkleber-23

The information contained in this document (the "Product Specification") is based on our present knowledge. They do not exempt the processor or user from carrying out its own tests. Properties of the product going beyond the above-mentioned specifications and/or suitability for a specific purpose cannot be derived from the product specification and are not owed. Any existing legal provisions and regulations concerning the handling and use of the products must be observed by the processor or user of our products. We expressly point out that the owed quality of our product is measured exclusively on the basis of the properties warranted in this document; the fulfillment of additional legal objective quality requirements is not owed. By ordering our product without objection, being aware of this product specification, you agree to it.



TECHNICAL DATA SHEET

UVALUX[®] LED U5L-8CT51FCM Coldfoil Adhesive

FCM Coldfoil Adhesive for LED-UV Offset and LED-UV Letterpress,
not tinted

according to the recommendations in this Technical Information and that the printed substrate provides a sufficient barrier to prevent migration into the foodstuff:

- + EU framework regulation: Regulation (EC) No 1935/2004.
- + EU plastics regulation: Regulation (EU) No 10/2011.
- + EU restriction of BPA and other hazardous Bisphenols in FCM: Regulation (EU) No 2024/3190.
- + Swiss Consumer Good Ordinance SR817.023.21 (Swiss Ink Ordinance).
- + German Consumer Good Ordinance (German Ink Ordinance).
- + Regulation (EC) No 1895/2005.
- + EuPIA Guideline on Printing Inks applied to Food Contact Materials.
- + Nestlé Standard on Printing Inks for Food Packaging (St-80.001-01, 02/04/2024).
- + To meet the requirements of the EU packaging regulation (EU) 2025/40 (PPWR) PFAS (incl. PTFE) are not used as raw material.

We manufacture our FCM products in accordance with Regulation (EC) No 2023/2006 (Good Manufacturing Practice, GMP). The resulting requirements for printing ink manufacturers are described in the EuPIA-GMP (see www.eupia.org).

In general, you need to evaluate the final packaging to ensure that neither migration through the packaging nor set-off takes place. Due to the multitude of packaging materials and their different barrier properties, we are not able to provide a general statement regarding through-migration. Printing ink suppliers are not able to issue certificates or declarations of compliance, which cover the legal responsibility of the entire packaging chain. According to applicable law the manufacturer of the finished article and the filler have the full legal responsibility to ensure that their product is fit for its intended purpose and complies with the applicable rules. Relevant information required for migration testing is made available through our Statement of Composition.

UVALUX LED U5L-8CT51FCM Kaltfolienkleber

12/2025-UVALUX LED U5L-8CT51FCM Kaltfolienkleber-23

The information contained in this document (the "Product Specification") is based on our present knowledge. They do not exempt the processor or user from carrying out its own tests. Properties of the product going beyond the above-mentioned specifications and/or suitability for a specific purpose cannot be derived from the product specification and are not owed. Any existing legal provisions and regulations concerning the handling and use of the products must be observed by the processor or user of our products. We expressly point out that the owed quality of our product is measured exclusively on the basis of the properties warranted in this document; the fulfillment of additional legal objective quality requirements is not owed. By ordering our product without objection, being aware of this product specification, you agree to it.