Ultra *Card* UVCC

UV-curable, high-opacity screen printing white for ID-card manufacturing

Suitable for laminating and embossing, satin ink film, very flexible, offset-overprintable, silicone-free

Vers. 3
2025
04. Jun

Field of Application

Substrates

Ultra *Card* UVCC is suitable for printing onto:

- PVC films (coated/uncoated)
- PLA (polylactide, coated/uncoated)
- Rigid PVC

Since all the print substrates mentioned may be different in printability even within an individual type, preliminary trials are essential to determine the suitability for the intended use.

Field of use

Ultra *Card* UVCC is suitable for printing on single and multi-layered identity cards such as customer loyalty cards, club cards, bank cards, telephone cards, smart cards, or ID system cards and excels through particularly good laminating characteristics. UVCC can also be used in combination with other printing methods such as flexo or waterless or UV offset printing.

Characteristics

The silicone-free formulation guarantees very good laminating results with high peel resistance.
For silicone-free products it is important to use only thoroughly cleaned stencils, squeegees, ink pumps, tubes (in the case of an automatic ink supply), and injectors for the manual ink filling of the stencil, etc.
If cleaning is carried out with automatic screen washing systems, we recommend prior to printing an additional manual cleaning with a fresh cleaner not having had any contact with ink residues containing silicone.

Ink Adjustment

The ink should be stirred homogeneously before printing and if necessary during production.

Drying

Ultra *Card* UVCC is a fast curing UV ink. A UV curing unit (medium-pressure mercury lamp) of 150 to 200 W/cm is therefore necessary.
Please check the block resistance carefully when printing on front and back. For a successful lamination process, good offset overprintability, and high peel resistance it is essential that the ink film is sufficiently cured.
The curing speed of the ink is generally dependant upon the kind of UV curing unit (reflectors), number, age, and power of the UV lamps, the printed ink film thickness, color shade, substrate in use, as well as the printing speed.
As with all UV-curable printing inks, the presence of residual monomers and photoinitiators' decomposition products cannot be completely ruled out even after sufficient curing. If these traces are relevant for the application, this must be taken into account in individual cases, as this depends on the actual printing and curing conditions.

Fade resistance

Pigments of high fade resistance (blue wool scale 6-8) are used for the UVCC range.

Stress resistance

After proper processing and thorough drying, the printed ink film can be cut or punched. UVCC shows good resistance against alcohol and finger sweat, and will meet the resistances required for credit cards after the lamination.

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Range

High Opaque Shades

175	Opaque White

Auxiliaries

UVV 1	Thinner	0-5%
UVV 3	Thinner, reactive	0-3%
UR 3	Cleaner (flp. 42°C)	
UR 4	Cleaner (flp. 52°C)	
UR 5	Cleaner (flp. 72°C)	

The addition of thinner reduces the ink viscosity if necessary. An excessive addition of thinner will cause a reduction of the curing speed, as well as of the printed ink film's surface hardness. The thinner becomes part of the cross-linked matrix when UV-cured and may slightly change the inherent odor of the printed and cured ink film.

The cleaners UR 3 and UR 4 are recommended for manual cleaning of the working equipment. Cleaner UR 5 is recommended for manual or automatic cleaning of the working equipment.

Printing Parameters

All types of commercially available fabrics and solvent-resistant stencils can be used. The fabric recommendation is 90-48 to 120-34.

Laminating parameters
The following laminating parameters have proven to work for PVC on the market:
Laminating temperature: 140 °C to 150 °C
Pressure: 1 ton for sheet sizes of 35 x 50cm
Laminating time: approx. 15 min

Shelf Life

Shelf life depends very much on the formula/ reactivity of the ink system as well as the storage temperature.
For an unopened ink container it is **1 year**.

We recommend our products to be stored in a dark, dry and well-ventilated surrounding, providing an ambient temperature of 5 °C - 35 °C. Please protect from heat and direct sunlight. If storage conditions do not comply with this recommendation, the shelf life is no longer guaranteed.

Note

Our technical advice whether spoken, written, or through test trials corresponds to our current knowledge to inform about our products and their use. This is not meant as an assurance for certain properties of the products nor their suitability for each application.
You are, therefore, obliged to conduct your own tests with our supplied products to confirm their suitability for the desired process or purpose. The foregoing information is based on our experience and should not be used for specification purposes. All characteristics described in this Technical Data Sheet refer exclusively to the standard products listed under "Range", provided that they are processed in accordance with their intended use and only when used with the recommended auxiliaries. The selection and testing of the ink for specific applications is exclusively your responsibility. Should, however, any liability claims arise, they shall be limited to the value of the goods delivered by us and utilised by you with respect to any and all damages not caused intentionally or by gross negligence.

Labelling
For Ultra *Card* UVCC and its auxiliaries, there are current Material Safety Data Sheets available according to EC regulation 1907/2006, informing in detail about all relevant safety data including labelling according to EC regulation 1272/2008 (CLP regulation). Such health and safety data may also be derived from the respective label.

Safety rules for UV printing inks
UV-inks contain some substances which may irritate the skin. Therefore, we recommend to take utmost care when working with UV-curable printing inks. Parts of the skin soiled with

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ink are to be cleaned immediately with water and soap. Please read the notes on labels and safety data sheets.

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