

Product Data Sheet

Screen Printing Varnish

UV 70/683

UV-Curing Screen “Water Drop Effect” Varnish, 1-Component

APPLICATION

UV-curing screen printing varnish for printing of tactile effects (e.g. “water drop effect”) resulting in a transparent clear image. Suitable for paper and cardboard (also offset printed) substrates with smooth, non-absorbent surfaces and rigid PVC, PVC self-adhesive foils.

PROPERTIES

- Solvent-free UV-curing screen varnish UV 70/683 has a medium reactivity.
- UV 70/683 is delivered in a ready-to-print adjustment. This high-gloss varnish is transparent.
- UV 70/683 has a medium viscosity.
- Using corresponding thick layer stencils, relief prints (structures of a max of 1.5 mm in width) up to a height of 100µ are possible.
- UV 70/683 is not suitable for double-sided prints.
- UV 70/683 exhibits a good weather resistance.
- Note: Because of the variety substrates and the potential of high layer thicknesses, pre-tests to determine suitability of UV 70/683 are essential, especially concerning handling during production run (stackability) and further processing of prints (cutting, folding, die-cutting, grooving, slotting etc.).

PRODUCT - OVERVIEW

- Clear varnish: UV 70/683 Medium viscosity, highly transparent, high gloss

LIGHT FASTNESS

Applied on suitable substrates UV 70/683 is suitable for outdoor applications.

ADJUSTMENT FOR SCREEN PRINTING

- Screen printing varnish UV 70/683 is supplied in a ready-to-print adjustment.
- Addition of auxiliary agents is not intended.
- Prior to printing, the varnish should be stirred well to obtain a homogeneous dispersion of all ingredients.

AUXILIARY AGENTS

An addition of auxiliary agents is not intended.

DRYING / UV-CURING

- UV 70/683 only dries/cures under UV-radiation.
- Suitable UV-driers with Hg medium-pressure lamps (250 – 400 nm) and an efficiency between 80 and 200 W/cm have to be used.
- Preferably, use reflectors with a focussed radiation.
- Ensure an even radiation (intensity/distance to the lamps) of the whole printed image.
- The UV-energy required depends on construction/performance of the UV drier, the thickness of the printed varnish layer and type of substrate. Hence, printers should determine the exact required energy with their own UV-drier.
- **UV-curing energy guide values:**
UV-energy: 200-300 mJ/cm²
(measured with Kühnast UV-integrator, 250 – 410 nm, max. 365 nm)
Belt speed: **UV-radiator:** 1 x 120 W/cm: 8 - 11 m/min.
2 x 120 W/cm: 16 - 22 m/min.

- Adhesion of the varnish should only be checked several minutes after curing. Due to the post-curing process of the varnish and depending on the substrate, sufficient adhesion may sometimes only be achieved after up to 24 hours.

SCREEN FABRIC / STENCILS

UV 70/683 has been formulated for printing with fabrics ranging from 32 to 64 threads/cm. To obtain the required stencil thickness (EOM) suitable copy layers or capillary films are required.

- Emulsions, e.g. Murakami SP9600 or MSP-2 – multiple layers with intermediate drying or pouring method with photo mount (passe-partout).
- Capillary films, e.g. Murakami products such as MS-Film, preferably thicknesses ranging from 100 – 200µ. Transfer with One Pot Sol emulsion.

Printability and UV-curing properties of UV 70/683 with coarser or finer fabrics should be determined by corresponding pre-trials.

CLEANING

Uncured UV varnishes can be removed from stencils and tools using our solvent based universal cleaning agents of the URS range.

Cleaning of cured UV varnishes is very time-consuming and hardly ever possible.

Note: As the acrylates contained in these UV varnishes may cause skin irritation, clean contaminated skin with water and soap immediately. Remove and clean contaminated clothing straightaway.

PACK SIZE

Screen printing varnish UV 70/683 is delivered in 1 and 5 litre containers. Other pack sizes are available upon request.

SHELF LIFE

In closed original containers, UV 70/683 screen varnish generally has a shelf life of 1 year from date of production.

For exact date of expiry, please refer to the label.

SAFETY DATA SHEETS

Read safety data sheet prior to processing.

Safety data sheets comply with Regulation (EC) No. 1907/2006 (REACH), Appendix II.

CLASSIFICATION AND LABELLING

Hazard classification and labelling comply with Regulation (EC) No. 1272/2008 (CLP/GHS).

CONFORMITY

Coates Screen Inks GmbH does not use any of the substances or mixtures for the production of printing inks, which are banned according to the EUPIA (European Association of the Printing Inks Industry) exclusion policy.

Further compliance confirmations are available upon request.

ADDITIONAL INFORMATION ABOUT OUR PRODUCTS

Product data sheets: Auxiliary Agents for UV-Curing Screen Printing Inks

Brochures: UV-Curing Screen Printing Inks

Internet: Various technical articles are available for download on www.coates.de, section "SN-Online"

The statements in our product and safety data sheets are based on our present experiences, however they are no assurance of product properties and do not justify a contractual legal relationship. We provide these details to inform customers about our products and their possible applications. However, on account of various factors influencing processing of our products it is absolutely essential to carry out printing trials under local production conditions. Choice of individual ink types and their suitability for the intended application is the sole and entire responsibility of the user. We do not assume any liability for any problems of technical or process-related nature. Any liability shall be limited to the value of the goods delivered by us and processed by the user.

All former product data sheets are no longer valid.

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