

Product Data Sheet

Screen Printing Varnish

SunChemical®
Coates Screen Inks

NEU-UVPO 70/628

UV-Curing Relief Varnish, 1-Component

APPLICATION

UV-curing screen printing varnish (ink range UVPO) for printing of tactile effects (relief effects). For printing on substrates with difficult surfaces such as laminated OPP foils, coated offset prints and Corona-treated rigid PP foils.

PROPERTIES

- Solvent-free UV-curing screen varnish NEU-UVPO 70/628 has a medium reactivity.
- NEU-UVPO 70/628 is delivered in a ready-to-print adjustment. The varnish is highly transparent and glossy.
- NEU-UVPO 70/628 has a medium viscosity.
- Using corresponding thick layer stencils, relief prints are possible
- NEU-UVPO 70/628 is not suitable for double-sided prints.
- NEU-UVPO 70/628 is suitable for indoor and short to medium-term outdoor applications.
- Note: Because of the formulation NEU-UVPO 70/628 only has a medium blocking resistance and limited stackability. Prints should be stacked in a cool environment. The blocking risk will also be influenced by design/coverage, the thickness of the printed varnish as well as the reverse side of the substrate. Papers with a matt coating will often react more sensitive than matt or coated surfaces. Therefore, check stackability for each application.
- Note: Because of the variety of the above mentioned difficult substrates in combination with very high layer thicknesses, pre-tests to determine suitability of NEU-UVPO 70/628 are essential, also concerning adhesion and especially further processing of prints (cutting, folding, die-cutting, grooving, slotting etc.).

PRODUCT - OVERVIEW

- Clear varnish: NEU-UVPO 70/628 Medium viscosity, transparent, glossy

LIGHT FASTNESS

Applied on suitable substrates NEU-UVPO 70/628 is suitable for indoor and short to medium term outdoor applications.

ADJUSTMENT FOR SCREEN PRINTING

- Screen printing varnish NEU-UVPO 70/628 is supplied in a ready-to-print adjustment.
- Generally, addition of auxiliary agents is not necessary. For some rare and special applications and depending on local conditions, addition of certain agents/additives is possible.
- Prior to printing, the varnish should be stirred well to obtain a homogeneous dispersion of all ingredients.

AUXILIARY AGENTS

Application	Product	Addition in % by weight	Additional Information
Thinning	Additive UV/V*	Max. 5%	Standard thinner
Reactivity increase	LAB-N 551564	1 - 2%	Photoinitiator

* Thinner Additive UV/V is a reactive UV monomer, not a commercial solvent!

DRYING / UV-CURING

- NEU-UVPO 70/628 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: 250-400 mJ/cm²
(measured with Kühnast UV-integrator, 250 – 410 nm, max. 365 nm)
Belt speed: UV-radiator: 1 x 120 W/cm: 5 - 8 m/min.
2 x 120 W/cm: 10 - 16 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

NEU-UVPO 70/628 has been formulated for printing of tactile structures with fabrics ranging from 54 to 77 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 NEU-UVPO 70/628 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 NEU-UVPO 70/628 is delivered in 1 and 5 litre containers. Other pack sizes are available upon request.

SHELF LIFE

In closed original containers, NEU-UVPO 70/628 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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