

# Product Data Sheet

# Screen Printing Varnish

**SunChemical**<sup>®</sup>  
Coates Screen Inks

## UV 70/XT

## UV 70/XT-MT

### UV-Curing Overprint Varnishes, Glossy or Matt, 1-Component

#### APPLICATION

UV-curing screen printing varnishes for full or partial finishing of graphic prints and protective coating for technical applications. Suitable for paper, cardboard, polystyrene (PS), PVC self-adhesive foils and rigid PVC.

#### PROPERTIES

- Solvent-free UV-curing screen varnishes UV 70/XT and UV 70/XT-MT have a medium reactivity.
- Both varnishes cure quickly and are delivered in a ready-to-print adjustment with a medium viscosity.
- Cured film of UV 70/XT has a high gloss.
- UV 70/XT-MT has a matt finish.
- Both varnishes are suitable for difficult offset prints. They can also be used for double-sided coatings.
- Both adjustments result in a tough ink film with good resistances to mechanical abrasion and chemicals.
- UV 70/XT and UV 70/XT-MT show good weather resistance.
- Note: Because of the variety of paper and cardboard materials and different offset prints, pre-tests to determine suitability of UV 70/XT and UV 70/XT-MT are essential, especially concerning further processing of prints (cutting, folding, die-cutting, grooving, slotting etc.).

#### PRODUCT - OVERVIEW

- Clear varnish: UV 70/XT Medium viscosity, high gloss
- Clear varnish: UV 70/XT-MT Medium viscosity, matt

#### LIGHT FASTNESS

Applied on suitable substrates UV 70/XT and UV 70/XT-MT are suitable for outdoor applications.

#### ADJUSTMENT FOR SCREEN PRINTING

- Screen printing varnishes UV 70/XT and UV 70/XT-MT are 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, both varnishes 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. 10%	Standard thinner
Viscosity increase	Thickening powder	1 - 2%	Stir with mixer
Reactivity increase	LAB-N 560700	1 - 3%	Photoinitiator
Flow agent	Additive UV/VM	1 - 2%	Do not overdose!
	Additive UV/N	1 - 2%	Wetting agent, improves flow properties

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

## DRYING / UV-CURING

- UV 70/XT and UV 70/XT-MT only dry/cure 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:**  
(printed with 150-31 fabric, white substrate)  
**UV-energy: 250-400 mJ/cm<sup>2</sup>**  
(measured with Kühnast UV-integrator, 250 – 410 nm, max. 365 nm)  
**Belt speed: UV-radiator: 1 x 120 W/cm: 8 - 12 m/min.**  
**2 x 120 W/cm: 16 - 24 m/min.**
- Adhesion 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/XT and UV 70/XT-MT have been formulated for printing with fabrics ranging from 150 - 165 threads/cm. Suitability for printing with coarser or finer fabrics should be determined by corresponding pre-trials.

All copy emulsions and capillary films suitable for solvent based and UV-curing screen inks can be used, such as our program of SunCoat or Murakami products.

## 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 varnishes UV 70/XT and UV 70/XT-MT are delivered in 1 and 5 litre containers. Other pack sizes are available upon request.

## SHELF LIFE

In closed original containers, UV 70/XT and UV 70/XT-MT screen varnishes generally have 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](http://www.coates.de),  
section "SN-Online"

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*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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