

Technical Data Sheet

TPC 770

UV - Curing Pad Printing Ink

TPC 770_en3.doc

20.11.2008 / 24.07.2008 / Lgg

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UV - Curing Pad Printing Ink TPC 770

Application

UV-curing pad printing ink range TPC 770 is suitable for printing onto rigid and plasticized PVC, polycarbonate, polyester, polyamide, duroplastics, coated surfaces and various polystyrene modifications.

Due to the different properties of printing materials, even within the same material range, printing tests are absolutely necessary.

Properties

UV- curing pad printing inks TPC 770 show good printability even if printing speed is high and the plates used are deeply etched.

Chemical resistance is good. They also show a very good abrasion resistance.

Colour Shades

The colour shades of the TPC 770-NT range show heavy metal free pigmentation and correspond to EN 71, part 3, safety of toys, migration of certain elements.

Ink Colour Programme

Standard Shades

TPC 770/60-NT white
TPC 770/65-NT black

Process Colour according to European Scale

TPC 770/180-NT yellow
TPC 770/181-NT magenta
TPC 770/182-NT cyan

Mixing System Base Colours

TPC 770/GF-01-NT primrose

TPC 770/GF-02-NT golden yellow
TPC 770/GF-03-NT orange
TPC 770/GF-04-NT scarlet
TPC 770/GF-05-NT magenta
TPC 770/GF-06-NT red
TPC 770/GF-07-NT violet
TPC 770/GF-08-NT blue
TPC 770/GF-09-NT green
TPC 770/GF-11-NT white
TPC 770/GF-12-NT black
TPC 770/GF-13 varnish

Bronze Inks

Bronze pastes and powders 75 to 79 are available for printing of silver and gold colour shades. The bronze pastes are mixed with the corresponding varnish TPC 770/GF-13 prior to processing. Gold and silver bronzes are metal pigments which may react with the pH-acidic UV components. Therefore mixed bronze inks should be processed quickly (pot life of approx. 24 hours).

Mixing ratios (parts by weight) are as follows:

Gold bronze paste : TPC 770/GF-13 = 1:3
Silver bronze paste : TPC 770/GF-13 = 1:4

Adjustment for Pad Printing / Auxiliary agents

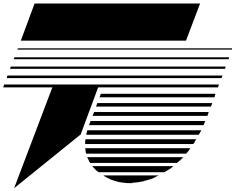
Printing consistency is adjusted with 5-15% thinner VD, VS or VT (quicker), or retarder ZG.

Viscospatula time = 6 ...10 sec.

In the event of static discharge on the printing surface, our Antistatic Paste AP brings a splash-free printing quality.

Recommended range = 3 ... 5 %. More than 5 % results in less opacity.

Liquid anti-static products produce fewer positive effects.



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Processing

The following processing parameter have to be followed:

Plate:

All kinds of clichés can be used, however due to their better resistance steel plates are preferred. Criteria for choice of plates are comparable to those of conventionally drying pad printing inks.

Plate depths:

Plate with an etching depth of 16...24 µm.

Type and quality of pad:

Processing of TPC 770-NT should be carried out with AntiStatic-LongLife-Pads with an unworn surface (hardness 54/64 Shore-00).

UV-curing

Pad printing inks TPC 770 only cure under UV-radiation of suitable wavelength and intensity. Drying parameter depend on layer thickness, colour and substrate.

Curing energy should be between 750 and 2000 mJ/cm². Further processing and stacking of the prints can be carried out immediately after drying, however maximum chemical and abrasion resistance will only be achieved after a period of 24 hours.

NOTE: Cured prints are difficult to overprint. Therefore, there should be no intermediate curing in multi-colour printing. Cure after printing all layers.

Cleaning

For cleaning of stencils and tools our universal cleaning agent RE can be used.

Packing

TPC 770-NT inks are available in 1 liter cans (approx. 1.06 qt.).

Shelf Life

For information regarding shelf life please see tin label.

Marking

Read material safety data sheets prior to processing. The material safety data sheets according to (EG) 1907/2006 contain marking in compliance with the regulation on dangerous preparations (1999/45/EG) as well as instructions for precautions when processing, handling and storing as well as first aid. The information given in the material safety data sheet refers to processing as described in this technical leaflet.

The statements in our leaflets 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. They serve to advise our business associates, but it is absolutely necessary to make your own printing tests under local conditions, with regard to the intended purpose prior to starting the job.

- All former leaflets are no longer valid. April 2008. Version Nr.4