

Technical Data Sheet

TPC 790

UV - Curing Pad Printing Ink

TPC 790_en3.doc

20.11.2008 / 24.07.2008 / Lgg

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UV - Curing Pad Printing Ink TPC 790

Application

TPC 790 is a UV-curing pad printing ink which was especially developed for ABS material. However, also SAN, polystyrene, PVC and other substrates can be printed.

The modified TPC 790 is suitable for polyamide, also glass-fibre reinforced. This adjustment will also show adhesion on various metals. TPC 790 shows a lower degree of gloss than TPC 780.

Pretests are absolutely necessary!

Colour Shades

The colour shades of the TPC 790-NT range show heavy metal free pigmentation and correspond to EN 71, part 3, safety of toys, migration of certain elements.

Ink Colour Programme

Process Colour according to European Scale

TPC 790/180-NT yellow
TPC 790/181-NT magenta
TPC 790/182-NT cyan

Mixing System Base Colours

TPC 790/GF-01-NT primrose
TPC 790/GF-02-NT golden yellow
TPC 790/GF-03-NT orange
TPC 790/GF-04-NT scarlet
TPC 790/GF-05-NT magenta
TPC 790/GF-06-NT red
TPC 790/GF-07-NT violet
TPC 790/GF-08-NT blue
TPC 790/GF-09-NT green
TPC 790/GF-11-NT white
TPC 790/GF-12-NT black
TPC 790/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 790/GF-13 respectively 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 790/GF-13 = 1 : 3
Silver bronze paste : TPC 790/GF-13 = 1 : 4

Adjustment for Pad Printing

Prior to processing pad printing inks TPC 790-NT are adjusted with 10 ... 20 % thinner VD or VS (quicker). Retarder = VG.

Viscospatula time = 6 ...10 sec.

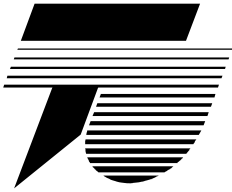
In the event of static discharge on the printing surface, our Antistatic Paste AP brings a splash-free printing quality.

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

Liquid anti-static products produce fewer positive effects.

Processing

The following processing parameter have to be followed:



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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 790-NT should be carried out with AntiStatic-LongLife-Pads with an unworn surface (hardness 54 Shore-00).

UV-curing

Pad printing inks TPC 790 only cure under UV-radiation of suitable wavelength and intensity. Drying parameter depend on layer thickness, colour and substrate.

Curing energy should be between 500 and 1000 mJ/cm². Maximum chemical and abrasion resistance will 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 790-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 working materials 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