Technical Data Sheet TPC 760, UV - Curing Pad Printing Ink

UV - Curing Pad Printing Ink TPC 760

Application

For printing onto pre-treated polypropylene. Due to various degrees of polymerisation as well as contents and fillers the substrate polypropylene shows an undefined printability. Therefore printing tests in production conditions are absolutely necessary.

Colour Shades

The colour shades of the TPC 760-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 760/180-NT yellow
TPC 760/181-NT magenta
TPC 760/182-NT cyan

Mixing System Base Colours

TPC 760/GF-01-NT primrose
TPC 760/GF-02-NT golden yellow
TPC 760/GF-03-NT orange
TPC 760/GF-04-NT scarlet
TPC 760/GF-05-NT magenta
TPC 760/GF-06-NT red
TPC 760/GF-07-NT violet
TPC 760/GF-08-NT blue
TPC 760/GF-09-NT green
TPC 760/GF-11-NT white
TPC 760/GF-12-NT black
TPC 760/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 760/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 : TPC760/GF-13 = 1 : 3
Silver bronze paste : TPC 760/GF-13 = 1 : 4

Adjustment for Pad Printing

Prior to processing pad printing inks TPC 760-NT are adjusted with 10 … 20 % thinner VS or VT (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:

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

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UV-curing

Pad printing inks TPC 760 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 1500 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 760-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.3

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