

UV - Curing Protective Varnishes TPC 750

Application

Ink type TPC 750 has been developed as golf balls and is suitable for printing onto ABS, PC, PMMA and other plastics.

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

Properties

UV- curing pad printing ink TPC 750 show good printability and chemical resistance. **They also show a very good abrasion resistance.**

Colour Shades

The colour shades of the TPC 750-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 750/180-NT yellow
TPC 750/181-NT magenta
TPC 750/182-NT cyan

Mixing System Base Colours

TPC 750/GF-01-NT primrose
TPC 750/GF-02-NT golden yellow
TPC 750/GF-03-NT orange
TPC 750/GF-04-NT scarlet
TPC 750/GF-05-NT magenta
TPC 750/GF-06-NT red
TPC 750/GF-07-NT violet
TPC 750/GF-08-NT blue
TPC 750/GF-09-NT green
TPC 750/GF-11-NT white
TPC 750/GF-12-NT black
TPC 750/GF-13 varnish

For mixing of colour shades the formulations listed in the GF-recipe-catalogue can be used as a guide.

Varnishes

TPC 750 / 70-01-MT matt
TPC 750 / 70-02-NT glossy

UV- curing pad printing varnishes TPC 750 show good printability and chemical resistance. They also show a very good abrasion resistance

Auxiliary agents

Printing consistency is adjusted with 10-15% thinner or retarder:

Thinner VD
Thinner VS
Thinner VT
Retarder VG

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:

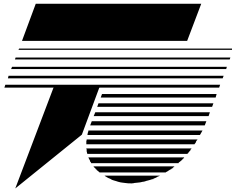
Plate:

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...22 µm.

Type and quality of pad:



Technical Data Sheet

TPC 750

UV- Curing Pad Printing Ink

TPC 750_en4.doc

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Processing of TPC 750 should be carried out with Anti-Static-Long-Life-Pads with an unworn surface (hardness 54 Shore-00).

UV-curing

TPC 750 only cure and polymerise to a stable, resistant ink film under application of UV-radiation within a wave-length between 250 ... 410 nm.

Curing-parameters depend on the applied layer thickness, surface properties and temperature.

Curing energy should be between 500 and 1500 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.

At room temperature drying speed will be about 3 m/min with 2x80 W/cm radiators. This corresponds to an energy value of approx. 2000 mJ/cm².

Radiator

High pressure mercury lamps with an efficiency of 80–120 W/cm are used to produce the required UV-radiation. Their emission spectrum is approx. 250-410 nm with maximum values at certain wavelengths.

The main problem with the radiators is the fact that the emitted spectrum does not always correspond to the absorption spectrum of the UV-curing pad printing inks and thus affects the curing speed. (Pre-tests in reference to UV-curing are absolutely necessary).

Cleaning

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

Packing

TPC 750 inks are available in 1 litre 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 product data sheet.

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