

## Series 711

**1- or 2- component pad printing ink**  
**Multi purpose pad printing ink for plastics.**

### Overview

Universal pad printing ink for technical and decorative applications on plastics. Highly opaque, low gloss pad printing ink for industrial and graphic applications on various plastics and coated surfaces. Series 711 is based on highly chemical and abrasion resistant synthetic resins suitable for indoor and outdoor use.

### Substrates

The formulation of 711 makes it suitable for use on a wide range of substrates such as rigid and flexible PVC, coated polyester, acrylics and PET-G (NB: risk of brittleness on injection moulded materials), polycarbonate, pre-treated polyolefines (PE/PP), many lacquered and coated surfaces, also cellulose acetate and CAB, paper and cardboard. Series 711 can also be used on polystyrene and its modifications (ABS, SA; etc.) with the use of a gentle (non-aggressive) thinner to avoid stress cracking in the surface.

**Due to the wide variety of materials and their many modifications we recommend print tests under local conditions with regard to the intended application prior to production.**

### Applications

Applications for 711 include decorative and functional printing on plastics for promotional products (hand out market), industrial applications like the automotive industry, electronic and pharmaceutical market, watches, etc. The high quality raw materials used in the formulation of 711 make it suitable for outdoor applications, and can be used with hardener (Series 700-HDA/HDR or HDI; 10:1) where greater mechanical and chemical print resistance is required.

**Series 711 (8005 black and 9005 white) has Class VI Certification for application on medical and surgical components.**

### Characteristics

This modern pad printing ink is suitable for open inkwell machines as well as ink cup (hermetic) systems. Series 711 is free of iron materials, so is not affected by printing problems caused by the magnetising of metal plates, filling knife, metal squeegee or metal caps.

Series 711 is formulated to deliver both the smooth surface desirable on full area print and to render fine detail print with exact definition. The recommended thinner (Series 700-017, thinner; Series 300-017/01 (non-aggressive) and Series 10-02637, retarders; Series 700-019, accelerator) facilitate the optimal transportation of ink from the plate, to pad and onto the substrate, as well as a fast tack-free drying on the printed material.

### Additives

Series 711 is specifically formulated for pad printing and user-friendly handling. A normal reduction of viscosity with the recommended thinner Series 700-017 (approximately 10-15% by weight) results a constant long-term consistency for both open inkwell and ink cup print production. Rotary print application requires a higher dilution with thinner; we recommend accelerator Series 700-019 at approximately 20%, and mostly makes the use of special retarders unnecessary under normal conditions. The accelerator 700-019 may be useful in closed cup systems.

Other auxiliary agents useful with Series 711 are describe in the Technical Data Sheet 'Series 700; Auxiliary Agents' including special thinner and retarder, hardener, adhesion promoter for PP, wetting agents, ant-static and anti-stringing agents. Note that the addition of additives changes the actual ink properties so that the spectrum of printable substrates as well as chemical and mechanical resistance may be adversely modified in some cases.

### Pigments

With the future tightening of environmental and health standards in mind, Series 711 is heavy metal free and mono-pigmented. This also means that in many cases pre-printing with white to achieve the desired colour shade is mostly not always necessary. A wide range of high-density (opaque) colour shades are available to cover practically the full colour chromatic spectrum:

Series 711-1005	MS - light yellow
Series 711-1205	MS - dark yellow
Series 711-2005	MS - orange
Series 711-3005	MS - red
Series 711-4005	MS - violet

Series 711-4505	MS - dark blue
Series 711-8005	MS - black
Series 711-9005	MS - white

In addition to these opaque shades there are also 5 highly pigmented transparent shades included in the PMS mixing system, and can be used for attractive results mixed with metallic shades:

Series 711-1105	MS - medium yellow
Series 711-3105	MS - magenta red
Series 711-3305	MS - magenta
Series 711-5005	MS - blue
Series 711-6005	MS - green

High density covering shades for increased print opacity:

Series 711-00/179	ST - high density white
Series 711-33	ST - high density black

The process colours for 4-colour halftone prints are ready to print and follow the European scale:

Series 711-0950	MS - cyan
Series 711-0960	MS - yellow
Series 711-0970	MS - magenta
Series 711-0980	MS - black

For transparent bases and varnishes, we offer the following:

Series 711-04	transparent Paste
Series 711-06	thixotropic Paste
Series 711-05	gloss varnish

A range of standard pre-mixed metallic colours are also available:

Series 711-100	ST - silver
Series 711-101	ST - brilliant silver
Series 711-102	ST - gold
Series 711-103	ST - copper gold

All Series 711 inks are non toxic and follow the European Regulation EN71, Part 3 (Safety of toys, migration of certain elements). All pigments used in Series 711 show a light fastness of 6-8 according to the wool scale (DIN 16525). If the colour shades are reduced with high amounts of white or transparent systems, light fastness may be reduced.

## **Drying**

The composition of the solvents ensures both long-lasting stability of the viscosity in the ink wells and closed cups, and quick release of solvents in the printing process. Series 711 doesn't show any corona formation, ensuring problem-free transfer as well as fast drying on the printed material. Series 711 is a high speed curing ink, there is normally no need for any special drying procedures however use of a drying tunnel (approx 55°C) allows for quick re-packing for shipment.

## **Screen/Cliche**

Series 711 doesn't contain any ingredients which attack polymer clichés or cause oxidation on steel printing blocks. Both steel and polymer plates are suitable for use with Series 711, with an etch depth of approximately 30 microns for steel and 20-30 micron for polymer plates depending on the image.

## **Pads**

Choosing the correct type of pad, shape and Shore-hardness depends on article (form, structure, surface tension, etc.) to be printed. Due to the 'fast' drying of the ink, a harder, pointer pad generally gives better results and reduces the potential for 'spider-webbing' in the print. Series 711 is compatible with all types of pads with normal handling practices i.e. delubrication of new printing pads, careful handling, don't wipe with solvents, cleaning with adhesive tape, etc. Silicone-activation of old pads may be achieved with the application of light pad oil (available in 100ml bottles).

## **Cleaning**

Wet and partially cured pad printing ink can be removed with all commercial solvent based cleaning agents of little polarity. Pad print specific universal cleaning agents Solva Wash 700-URT are the most suitable. Removal of completely cured pad printing ink is time consuming and only possible using very aggressive decoaters. If cleaning ink from pads with adhesive tape is not successful, low aggressive cleaning agents (eg metho) may be used on a cotton towel.

## **Storage**

Under normal conditions (limited change of temperature, medium temperature 20-35°C, humidity 20-70%) we guarantee a shelf life of 24 months from manufacture date and 12 months for metallics. Metallic colours are mixed to order to ensure you get the maximum shelf life from your inks.

## **Packaging**

Series 711 is available in 500gm and 1kg polyethylene containers.

## **Precautionary Measures**

Read the Material Safety Data Sheet (MSDS) prior to processing. The MSDS contain indications of hazardous ingredients, TLV-level and instructions for precautions when processing, handling and storing as well as first aid. The information given in the MSDS refers to processing as described in this technical leaflet. The statements in these leaflets have been made to the best of our knowledge and are given without any obligation. These Technical Sheets serve to advise, but it is absolutely

necessary to undertake your own printing tests under local conditions with regard to intended purpose prior to starting the printing job. The application, use and processing of the products delivered by Colour Components are beyond our control and imply no liability or guarantee on our part. Issue 1; 04/06

© Colour Components 2006

## Certification Class VI

**Series 711 has Class VI Certification for application on medical and surgical components; 711-8005 black and 711-9005 white**

**TOXIKON FINAL GLP REPORT: 06-4898-G1**

**CLASS VI TEST – USP**

Test Article  
Padprinting Ink Series 711-8005 black

Author  
Jianxun Xie, Ph.D.

Final Report Date  
November 2, 2006

COMPLIANCE  
21 CFR, Part 58  
Good Laboratory Practice for Non-Clinical Laboratory Studies

MANAGEMENT OF THE STUDY

Performing Laboratory  
Toxikon Corporation  
15 Wiggins Avenue  
Bedford, MA 01730

Sponsor  
MT Promed Consulting  
Altenhofstrasse 80  
D-66386 St. Ingbert  
Germany

**TOXIKON FINAL GLP REPORT: 06-4897-G1**

**CLASS VI TEST – USP**

Test Article  
Padprinting Ink Series 711-9005 white

Author  
Jianxun Xie, Ph.D.

Final Report Date  
November 2, 2006

COMPLIANCE  
21 CFR, Part 58  
Good Laboratory Practice for Non-Clinical Laboratory Studies

MANAGEMENT OF THE STUDY

Performing Laboratory  
Toxikon Corporation  
15 Wiggins Avenue  
Bedford, MA 01730

Sponsor  
MT Promed Consulting  
Altenhofstrasse 80  
D-66386 St. Ingbert  
Germany



## CERTIFICATE

# printcolor



### Printcolor pad printing ink lines Series 711

- are heavy metal free according to Euronorm DIN EN 71, part 3  
(PB < 10ppm / Cr < 6ppm / Hg < 3ppm / Cd < 5ppm (Recommendation IX and European Resolution AP/89))
  - are heavy metal free according ASTM Standard F 963-95
  - fulfil DIN 53160: Saliva and sweat resistance test of coloured toys
  - are free of chlorinated organic compounds (f.e. PCB, PCN, chlor. paraffins, other chlorinated org. compounds)\*
  - are free of brominated organic compounds (f.e. PBB, TBBP-A-bis, PBdiphenylethers, other brominated org. compounds)
  - following 5<sup>th</sup> Alteration of Bedarfsgegenständeverordnung (engl. Consumer goods)
  - are free of organic tin compounds (f.e. TBT, TPT)
  - are free of listed Azo compounds
  - are free of Asbestos
  - are free of Formaldehyd (exception: fluorescent colors)
  - are free of free vinyl chlorid or monomeric VC
- \* blue and green contains phthalocyanine pigments

May 10, 2004

Printcolor Screen Ltd.



**Marc Bär**  
Managing Director

**Dieter Hermann**  
Technical Manager

CH-8965 Berikon, 14th February 2012

## REACH - SVHC

---

We herewith confirm that all raw materials used by Printcolor Screen Ltd. for production are

- pre-registered with respect to REACH-conformity
- not chemically modified during the manufacturing process
- conform to the threshold values of the ECHA SVHC Candidate List (December 2011) – excluding the waterbased Series 420 – they still contain small amounts (<3%) of 1-Methyl-2-pyrrolidone, CAS-No. 872-50-4.

**Printcolor Screen Ltd. CH-8965 Berikon (Schweiz)**

[www.printcolor.ch](http://www.printcolor.ch)

14-02-2012

**Printcolor Screen Ltd.**



**Richard Gähwiler**  
HSE Manager



**Dieter Hermann**  
CEO