

**Pad printing ink for ABS, polystyrene, SAN, rigid PVC, polycarbonate, acrylic glass, and varnished surfaces**

**Glossy, good opacity, very fast drying 1- or 2-component system, resistant to alcohol and petrol, versatile, for closed and open systems**

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## Field of Application

### Substrates

Tampaplus TPL is particularly suited to print onto ABS, polystyrene (PS), SAN, rigid PVC, polycarbonate (PC), acrylic glass (PMMA), some types of soft PVC, wood, paper and cardboard.

By adding Hardener H 1, Tampaplus TPL adheres excellently to many other substrates, such as varnished surfaces, thinly anodised aluminium or some thermosetting plastics.

Since all the print substrates mentioned may be different in printability even within an individual type, preliminary trials are essential to determine the suitability for the intended use.

### Field of use

The glossy and very fast drying pad printing ink Tampaplus TPL particularly distinguishes itself by very good printability even in the closed ink pot system.

It is therefore especially suited for printing on high-quality products such as for example cosmetic packaging, housings, and other items requiring high resistance, in industrial applications but also in the field of promotional items.

## Characteristics

### Pot life

The pot life (processing period) at room temperature (approx. 20 °C) will be about 8-10 h with H 1. Higher temperatures during processing reduce the pot life.

If the mentioned times are exceeded, the ink's adhesion and resistance may be reduced, even if the ink characteristics show no noticeable change.

### Drying

Tampaplus TPL is a very fast physically drying ink and it is, therefore, immediately overprintable when printing on multi-colour machines (wet on wet). The addition of Hardener H 1 will extend the drying time.

The times mentioned above vary according to substrate, depth of cliché, drying conditions, and the auxiliaries used.

The processing and curing temperature should not be lower than 15 °C as irreversible damage can occur. Also avoid high humidity for several hours after printing as the hardener is sensitive to humidity.

### Fade resistance

Only pigments of high fade resistance are used in the Tampaplus TPL range.

Shades mixed by adding overprint varnish or other colour shades, and especially white, have a reduced fade and weather resistance depending on their mixing ratio. The fade resistance also decreases if the printed ink film thickness is reduced.

Even if TPL seems to be dry already few minutes after printing, it is recommended to carry out resistance tests no earlier than 24 hours after printing.

The pigments used are resistant to solvents and plasticizers.

# Tampaplus TPL



## Stress resistance

After proper and thorough drying, the ink film exhibits outstanding adhesion as well as rub, scratch, and block resistance, is resistant to alcohol and petrol.

In some cases surface stability as well as adhesion and resistance to solvents may be improved by adding 10 % of Hardener H 1.

## Range

Refer to the shade card "System Tampacolor".

TPL 920	Lemon	TPL 950	Violet*
TPL 922	Light Yellow *	TPL 952	Ultramarine blue*
TPL 924	Medium Yellow	TPL 954	Medium Blue
TPL 926	Orange	TPL 956	Brilliant Blue*
TPL 930	Vermilion *	TPL 960	Blue Green
TPL 932	Scarlet Red	TPL 962	Grass Green *
TPL 934	Carmine Red	TPL 970	White, semi-gloss
TPL 936	Magenta*	TPL 980	Black
TPL 940	Brown		

\* semi-transparent/ transparent

All shades are intermixable. To maintain the special characteristics of this outstanding ink range, the TPL should not be mixed with other ink types.

Tampaplus TPL is included in our computerised colour matching system Marabu-mix.

By using these basic shades in accordance with the mixing ratios provided by the Marabu-Color-Manager software, it is possible to produce shades of the popular colour reference systems PANTONE®, HKS®, RAL®, and Marabu System 21.

## Further shades available

TPL270 High-Gloss White

## Shades for 4-colour process prints

TPL 429	Process Yellow (Yellow)
TPL 439	Process Red (Magenta)
TPL 459	Process Blue (Cyan)
TPL 489	Process Black (Black)

## Press-ready gold and silver shades

TPL 191	Silver
TPL 192	Rich Pale Gold
TPL 193	Rich Gold

## High-gloss metallics

TPL 291	High-Gloss Silver
TPL 292	High-Gloss Rich Pale Gold
TPL 293	High-Gloss Rich Gold

## Clears

TPL 910	Overprint Varnish, can also be used as bronze binder
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The pigments used in the above mentioned standard shades, based on their chemical structure, correspond to the EEC regulations EN 71/part 3, safety of toys - migration of specific elements. All colours are suited for printing onto toys.

## Auxiliaries

Thinner:	TPV TPV 2, fast thinner TPV 3, slow
Hardener:	H 1 HT 1, heat-reactive
Mixing ratio:	10 p. ink : 1 p. hardener
Retarder:	SV 1 VP, Retarder Paste
Matting product:	ABM, Matting Paste MP, Matting Powder
Antistatic Paste:	AP
Opaquing Paste:	OP 170
Cleaner:	UR 3
Printing modifier:	ES, addition: 0 - max. 1 %

To adjust printing viscosity, it is generally sufficient to add 10-20 % of Thinner TPV to the ink. Thinner TPV 2 can be used for fast printing, TPV 3 for slow printing requirements.

For the printing of very fine motives, the Retarder SV 1 or Retarder Paste VP may be added to the ink. An excessive addition may result in ink transfer problems.

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## Attention

For an ink mixture containing retarder, only thinner should be used for additional thinning during the print run.

You can give Tampaplus TPL a matt finish by adding 5-20 % Matting Paste ABM or 2-4 % Matting Powder MP (in case of White 970, max. 2 %) which reduces opacity.

By adding the Opaquing Paste 170, the opacity of colour shades can significantly be increased without influencing the chemical and dry abrasion resistance considerably. Maximum quantity to be added is 15 %. OP 170 is not suitable for using it with white shades.

Printing Modifier ES contains silicone. It can be used to rectify flow problems on critical substrates by adding up to 1 % by weight to the ink.

If an excessive amount is added, flow problems are increased, and adhesion may be reduced, especially when overprinting.

## Cleaning

To clean ink containers, clichés, and tools, please use our Cleaner UR 3.

## Recommendation

The ink should be stirred well before printing. To protect the ink in opened containers against excessive drying, it can be carefully covered with a layer of thinner which can then be later stirred into the ink prior to printing.

## Labelling

For our ink type Tampaplus TPL and its additives and auxiliaries there are current Material Safety Data Sheets according to EC-regulation 91/155 informing in detail about all relevant safety data including labelling according to the present EEC regulations as to health and safety labelling requirements. Such health and safety data may also be derived from the respective label.

The ink has a flash point between 21 °C and 100 °C. Since the ink is not considered as a flammable liquid due to its pastous nature, any specific regulations for the handling of flammable liquids do not apply.

## Note

Please refer to the information in our technical data sheets of pad printing inks.

Our technical advice whether spoken, written, or through test trials corresponds to our current knowledge to inform about our products and their use. This is not meant as an assurance for certain properties of the products nor their suitability for each application.

You are, therefore, obliged to conduct your own tests with our supplied products to confirm their suitability for the desired process or purpose. The selection and testing of the ink for specific application is exclusively your responsibility.

Should, however, any liability claims arise, they shall be limited to the value of the goods delivered by us and utilised by you with respect to any and all damages not caused intentionally or by gross negligence.