

Technical Data Sheet

TPC 128

1- Component Pad Printing Ink

TPC 128_en2.doc

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One Component Pad Printing Ink TPC 128

High-covering, silk gloss pad printing ink on the basis of well resistant basic raw materials for the printing of pretreated and untreated Polypropylene materials.

Printing stock

The range of possible printing materials includes various kinds of Polypropylene plastic materials. It is of advantage if they are pretreated but they also show good adhesion if printed without pretreatment.

On the basis of the very great range of Polypropylene and the different modifications as well as the inclusion of Co-Polymers and recycling materials, preliminary tests to assess the suitability of the inks are indispensable.

Application

Polypropylene in the publicity field (hand-out articles) as well as in the technical printing segment (handles of tools, parts of casings, etc.). Very often the pretreatment of Polypropylene surfaces is superfluous. To reach optimum product properties, a surface tension of the PP printing stock of > 38 mN/m is advantageous. This can be obtained by flaming, coronization prior to printing or by application of an adherence primer.

Properties and handling

This modern pad printing system may be applied for open and closed machine systems. The application of raw materials containing iron was left off in order to avoid magnetization and resulting printing problems with closed systems.

The ink rheology has been chosen in such a manner that an excellent fluidity enables full-surface printing just as the internal thixotropy guarantees the printing of finest scripts and lines. The solvents used ensure optimum ink absorption and taking off as well as quick drying on the printing stock.

Additives

TPC 128 has been adjusted that - at normal reduction of viscosity by the universal pad printing thinner VM - there results a constant longer-term consistency for

open and closed machine systems (quantity added according to conditions 10-15 weight-%). The rotative application requires a higher dilution with thinner VM (quantity added approx. 20 weight-%).

To achieve shorter cycle or drying times, we recommend the fast thinner VO or the accelerator VR.

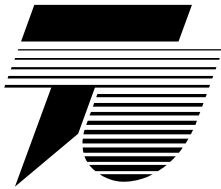
Other additives offering useful possibilities of modification are specified in the Technical Data Sheet - „Additives for Pad printing“. The addition of additives changes the actual product properties so that the spectrum of printing stock as well as the resistances may be modified.

Choice of pigments

TPC 128 being high-covering monopigmented and free of heavy metals, points to the future so that in many cases white underlaying to achieve the colour shades wanted becomes superfluous. A useful choice of covering basic shades is at the disposal of the user to cover practically the whole colour spectrum:

Standard Shades

TPC 128/10-NT light yellow
TPC 128/11-NT dark yellow
TPC 128/12-NT orange yellow
TPC 128/15-NT orange
TPC 128/17-NT ochre
TPC 128/20-NT light red
TPC 128/21-NT red
TPC 128/22-NT dark red
TPC 128/25-NT pink
TPC 128/30-NT luminous blue
TPC 128/31-NT blue
TPC 128/32-NT dark blue
TPC 128/33-NT black blue
TPC 128/34-NT light blue
TPC 128/37-NT violet
TPC 128/40-NT light green
TPC 128/41-NT dark green
TPC 128/42-NT turquoise
TPC 128/50-NT light brown
TPC 128/51-NT dark brown



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TPC 128/65-NT black

Other shades can be manufactured subject to our special ink shade regulation.

Mixing System Base Colours

TPC 128/PC-01-NT	Lemon yellow
TPC 128/PC-02-NT	Corn yellow
TPC 128/PC-03-NT	Orange
TPC 128/PC-04-NT	Carnation red
TPC 128/PC-05-NT	Violet
TPC 128/PC-06-NT	Cobalt blue
TPC 128/PC-07-NT	Green
TPC 128/PC-11-NT	White
TPC 128/PC-12-NT	Black

These high-covering basic shades are complemented by the transparent inks:

TPC 128/PC-14-NT	Yellow transparent
TPC 128/PC-15-NT	Red transparent
TPC 128/PC-16-NT	Magenta transparent
TPC 128/PC-17-NT	Blue transparent.

These transparent inks are suitable both to increase the brilliance at ink mixing and to produce metal colour shades by adding effect bronzes.

With respect to the halftone ink, the press-ready ink systems:

TPC 128/80-NT	Yellow
TPC 128/81-NT	Magenta
TPC 128/82-NT	Cyan
TPC 128/83-NT	Black/depth

as well as cutting pastes

TPC 128/TP	Transparent paste
TPC 128/TX	Thixotropy paste

are available.

Various standard varnishes are at the disposal of the user:

TPC 128/MT Mat varnish

which may be completed by individual special adjustments.

As metal effect inks the product pallet offers:

TPC 128/73-NT	Ducat gold
TPC 128/74-NT	Britannia Silver

TPC 128/75-NT

TPC 128/76-NT

TPC 128/77-NT

TPC 128/78-NT

TPC 128/79-NT

Gold clear

Gold medium

Gold redish

Copper

Silver,abrasion-proof

and the various special effects which may be completed according to customer's requirements. To these also belong the non metal effect bronzes.

All above mentioned colour adjustments are pigmented free of heavy metal and correspond to the regulations of EN 71, Part 3 (safety of toys, migration of specific elements). The inks show a high light-fastness of 6-8 according to the Blue Wool Scale (DIN 16525).

It has to be noted that strong lightening by white or clear varnish may cause a reduction of the light-fastness.

Drying

The composition of the solvents ensures both long-lasting stability of the viscosity in the ink troughs and ink containers and quick release of solvents in the dabbing process. This pad printing system does not show any corona formation, ensures an unproblematic transfer as well as quick drying on the printing stock.

Universal thinner VM usefully combines the above mentioned properties and mostly makes the use of special retarders unnecessary.

Printing plates

Pad printing ink TPC 128 does not contain any ingredients which attack polymer printing plates or cause oxidations on steel printing plates. Both printing methods are suitable, whereby a screening (positive contact screen) is advantageous for the production in most cases. Etching depths of approx. 22µm, depending on the motif, are practicable and do not require any special preliminary tests.

Pads

The choice of the correct type of pad, shape and hardness depends on the printing stock. It is independent of pad printing ink TPC 128 which accepts all types of pads. The handling of pads is generally binding, i.e. delubrication of new printing pads, careful handling, cleaning with adhesive tape, etc.

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Cleaning

The pad printing inks of TPC 128 can be removed from printing blocks and working material without any problems by commercial solvent-based cleaning agents. We recommend to use Universal cleaners RE and RM.

If the cleaning of the printing blocks by adhesive tapes does not work, cleaning agent industrial alcohol an ethanol alcohol may be applied by a soft tissue.

Shelf life

At normal conditions (little changes in temperature, medium temperature between 20-35 °C, humidity 20-70%), these pad printing systems have a shelf life of two years without losing their product properties.

Packing

As standard packing of 1 kg tin containers are available.

Removed residues of varnish can be supplied to the Polyolefin-Recycling. Packaging containing unhardened residues of varnish are subject to the special waste disposal regulations (waste disposal key No. 55509 Germany, waste disposal key No. 1640, Switzerland).

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.

These indications are based on laboratory test and practical experience. Our advice for technical applications is based on our best knowledge and can only be considered as guideline. It does not relieve you of making your own tests.

In case of doubt please contact our technical advisors. The application, use and processing of the products delivered by us are beyond our control. This is subject to your responsibility and there is no liability or guarantee on our part. April 2008. Version Nr.4

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