

Technical Data Sheet

TPC 118

1- Component Pad Printing Ink

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One Component Pad Printing Ink TPC 118

Universal plastic Pad Printing Ink for technical and decorative printing jobs.

High-covering silk gloss pad printing ink on the basis of very resistant elementary raw materials for the printing of various kinds of plastic materials. Indoor and outdoor application for industrial and graphic purposes.

Printing stock

The range of possible background materials includes various kinds of plastic materials such as hard and soft PVC, coated Polyester and PET-G, Polystyrene and its modifications such as ABS, SAN, etc., acrylic glass (PMMA) and Polycarbonate, pretreated Polyolefine, manifold coated surfaces and layers as well as Cellulose acetate and CAB, papers and cardboard products.

On the basis of the great variety of plastic materials and the different modifications as well as the inclusion of Co-Polymers and recycling materials, preliminary tests to assess the suitability of the ink are indispensable.

Application

Plastic materials in the publicity field (hand-out articles) as well as in the industrial printing segments (parts of control boards, dial plates, pharmaceutical articles, etc.).

As the basic raw material used were well chosen for high demands, outdoor application is possible as well as additional curing with corresponding hardeners HA or HM in order to increase the chemical resistance in extreme cases.

Properties and handling

This modern pad printing system may be applied for open and closed machine system. 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 118 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 rotating application requires a higher dilution with VM (quantity added approx. 20 weight-%).

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

The application of the special diluant VP on many Polystyrene-Co-Polymers has a positive effect.

Other additives offering useful possibilities of modification are specified in the Technical Data Sheet TPC 118 additives for pad printing.

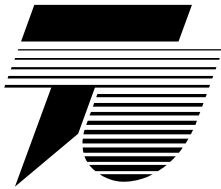
The addition of additives changes the actual product properties so that the spectrum of printing stock as well as the resistances may be modified.

Choice of pigments

TPC 118 being high-covering mono-pigmented and free of heavy metals according to the Euro-Norm 71, part 3, 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 118/10-NT light yellow
TPC 118/11-NT dark yellow
TPC 118/12-NT orange yellow
TPC 118/15-NT orange
TPC 118/17-NT ochre
TPC 118/20-NT light red
TPC 118/21-NT red



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TPC 118/22-NT dark red
TPC 118/25-NT pink
TPC 118/30-NT luminous blue
TPC 118/31-NT blue
TPC 118/32-NT dark blue
TPC 118/33-NT black blue
TPC 118/34-NT light blue
TPC 118/37-NT violet
TPC 118/40-NT light green
TPC 118/41-NT dark green
TPC 118/42-NT turquoise
TPC 118/50-NT light brown
TPC 118/51-NT dark brown
TPC 118/65-NT black

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

Mixing System Base Colours

TPC 118/PC-01-NT	Lemon yellow
TPC 118/PC-02-NT	Corn yellow
TPC 118/PC-03-NT	Orange
TPC 118/PC-04-NT	Carnation red
TPC 118/PC-05-NT	Violet
TPC 118/PC-06-NT	Cobalt blue
TPC 118/PC-07-NT	Green
TPC 118/PC-11-NT	White
TPC 118/PC-12-NT	Black

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

TPC 118/PC-14-NT	Yellow transparent
TPC 118/PC-15-NT	Red transparent
TPC 118/PC-16-NT	Magenta transparent
TPC 118/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 118/80-NT	Yellow
TPC 118/81-NT	Magenta
TPC 118/82-NT	Cyan
TPC 118/83-NT	Black/depth

as well as cutting pastes

TPC 118/TP	Transparent paste
TPC 118/TX	Thixotropy paste

are available.

Various standard varnishes are at the disposal of the user:

TPC 118/MT Mat varnish

which may be completed by individual special adjustments.

As metal effect inks the product pallet offers:

TPC 118/79-NT	Silver, abrasion-proof
TPC 118/74-NT	Britannia silver
TPC 118/76-NT	Gold clear
TPC 118/77-NT	Gold medium
TPC 118/78-NT	Copper

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 118 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.



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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 118 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.

Cleaning

The pad printing inks of TPC 118 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 PE 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.

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



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*on our part. - All former leaflets are no longer valid. April
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