TCP 9900

Type
Air-drying glossy padprinting ink. One or two-component ink that adheres well to many difficult substrates. Can also be used for screen printing. Long pot life.

Application
Can be used on pre-treated polyethylene and polypropylene, multiple types of coated polyester, ABS, PS, PVC, aluminum, sanded copper, tin, stainlesss steel and most lacquered substrates. Can also be used on polyester, glass and ceramics when used with different additives.

General
Even though the TCP 9900 is a two component ink that adheres well to all kinds of materials and that is resistant to many chemicals, the ink is air-drying, the chemical reaction between the two components takes place in dry inkfilm. That is also why the ink has a very long potlife.

Drying
The TCP 9900 ink dries by evaporation of the solvents. The chemical reaction between the two components only takes place when the ink has dried. The reaction does not require any oxygen, which means that printed materials can be stacked when they are dry without disturbing the hardening process.

When air dried, the ink is hand dry after 5-15 minutes. The drying time, also when heat drying, and therefore stackability is dependent on the surrounding temperature, fineness of the gauze, type of thinner,qualities of the material to be printed etc.

The inks can be enameled so as to obtain a better adhesion onto metals. Enameling can also be effectuated after heat drying in order to realize instant hardening of the inkfilm. Enameling: 10-25 minutes at 150-170 °C.Higher temperatures can cause yellowing or discoloration.
When using multi-color pad printing systems, drying in between might be necessary.

Gloss
All colors have a beautiful gloss.

Adhesion
Adheres well onto materials mentioned under 'Application'. The materials to be printed need to be free of oxides and grease. Ensure that the cleanser itself does not contain grease and that no condensation takes place. We recommend using **I.P. Thinner 29**. Polish the material with adry cloth. Judgment of adhesion is possible after reaction has fully taken place (usually after 48 hours).

Chemical resistance
When fully hardened, TCP 9900 inks are resistant to many cosmetic products, alcohols, detergents, mineral oils, kerosene and seawater.The ink is not very resistant to aggressive aromatics and ketones, acids and lyes.

Opacity
These inks have a high opacity, with the exception of the mixing colors. White and several other colors are available in an extra opaque option (EO). If necessary for certain application, tinters could be added for even more intense colors.

Light fastness and elasticity
All colors have a good light fastness when printed in fulltone. The thicker the layer of ink, the better the light fastness. Extending with white or clear will negatively affect the light fastness. Metals that have been printed using TCP 9900 can be molded after printing because of the inks elasticity.

Plate depths
The TCP 9900 pad printing inks transfer well and can be used with relatively large plate depths. For regular use, we recommend a depth between 26 and 35 μm. If air is blown onto the pad during printing, depths up to 40 μm can be used.

Hardener no.2
Add 6% of Hardener 2 to a weighed amount of ink. To improve adhesion and chemical resistance, add 10%. Only use thinner or retarder after properly mixing the hardener and the ink. At 20°C, the potlife of an ink-hardener mixture is around 48-72 hours. At lower temperatures, the potlife will be longer, provided that the ink is well closed off and stored in a dry place.

Hardener no.5
To increase adhesion onto glass and ceramics, add 15% of Hardener no. 5 to a weighed amount of ink. If desired, 5% of thinner or retarder can be added. Adhesion can be judged after 24 hours. Ink can be dried at room temperature or can be force dried. At 20°C, the potlife of an ink-hardener mixture is around 8 hours.

Hardener no.9
To obtain a water resistant layer of ink on glass, add 6% of hardener no. 9 to a weighed amount of ink. The ink must be dried at max. 140°C for around 20 minutes. Higher temperatures can cause yellowing of the harderer. At 20°C, the potlife of an ink-hardener mixture is around 48-72 hours.

Printing layers
When printing multiple layers (be it a next color or varnish), we recommend doing so within 48 hours to prevent damage to the underlying layer of ink. Only necessary when the ink has been mixed with hardener.

Thinner
Before adding thinner, stir the ink well.
When using photopolymer plates, all inks must be thinned using 30-35% of **Thinner 10**. When printing fine details or working in high temperatures, a mixture of **Thinner 8 and 10** can be added.

When using etched steel plates, all inks must be thinned using 15%. Adding too little thinner can be detrimental to printing and drying qualities of the ink.

Extension
To lower color intensity or obtain half transparent effects, TCP 9949 Clear can be added in every proportion. This will negatively affect the light fastness, depending on the amount added.

Varnish
To increase the glossiness of the inks or to improve scratch resistance, TCP 9949 Clear can be used as a varnish. To completely or partly mattify the ink, TCP 9945 Clear Flat can be used as a varnish.

Silver, Pale and Rich Gold
The gold and silver inks have a limited potlife in mixed form. Pastes are available to mix your own inks according to your needs. See Visprox Additives for more information on the gold and silver pastes. These inks always need to be coated with clear when used outside.

Halftone printing
For printing in halftone, TCP 9951 yellow, 9952 cyan, 9953 magenta and TCP 9954 black are available. These colors have a good light fastness. To adjust the intensity of the color, TCP 9949 Clear can be added in every proportion.

Cleaning the ink tray and plate
Cleaning should be done immediately after printing. We recommend using **Screenwash LOD** or **Screenwash GA**. It is possible to use the thinners that are compatible with the TCP 9900 series, however, those are less effective.

Test printing
Please, continually make test prints before moving on to printing the complete order.

This technical information is meant to be a guideline. Even though the information is given after detailed examination and to the best of our knowledge, AGA Color Solutions Europe b.v. can take no responsibility for it.

visprox TCP 9900

- 01 White EO, PR
- 02 Black EO
- 04 Primrose Yellow EO (± pms 101C)
- 31 Rich Yellow EO (± pms 7548 C)
- 07 Bright Orange (± pms1655C)
- 08 Fire Red EO (± pms 485C)
- 09 Geranium (± pms7621C)
- 10 Bright Red (± pms 2035C)
- 11 Bright Cerise (± pms 238C)
- 12 Violet (± pms 2685C)
- 13 Paris Green (± pms 2420C)
- 14 Dark Green EO (± pms 3308C)
- 15 Sky Blue EO (± pms 2195C)
- 16 Magenta (± pms2612C)
- 18 Medium Green EO (± pms 7726C)
- 19 Medium blue ± pms 2756C)
- 20 Crimson (± pms 202C)
- 22 Brilliant Blue EO (± pms 2738C)
- 23 Mono Blue (± pms 2194C)
- 27 Blue EO (± pms 301C)
- 29 Azure Blue (± pms2388C)
- 33 Super Orange EO (± pms2018)
- 34 Orange Red (± pms Bright red C)
- 35 Fashion Pink (±pms 674C)
- 37 Carnaby Violet (± pms2627C)
- 38 Brillaint Green (± pms 340C)
- 39 Spring Green (± pms 2270C)
- 41 Pale Red (± pms185C)
- 43 French Blue (± pms 2145C)
- 88 Ultra blue (± pms 2728C)
- A Lemon Yellow (± pms 012C)
- B Golden Yellow (± pms 7548C)
- C Orange (± pms 021C)
- D Red (± pms199C)
- E Carmine (± pms 200C)
- F Pink (± pms 214C)
- G Bright Violet (± pms 274C)
- H Permanent Blue (± pms2945C)
- K permanent Green (± pms2245C)
- 51 Yellow Tix (pms Process Yellow)
- 52 Cyan Tix (pms Process Cyan)
- 53 Magenta Tix (pms Process Magenta)
- 54 Black Tix (pms Process Black)
- 55 Rubine Red Tix (± pms Rubine Red C)
- 46-1 Pale Gold (± pms 871)
- 46-2 Rich Gold (± pms 10125C)
- 47 Silver EO (± pms 877C)
- Sparkling Silver (geen pms referentie)
- Pearl Base (± pms 10101C)
- Bronze paste (± pms 873C)
- 45 Clear Flat (Mat)
- 49 Clear
- 50 Base Tix
- Obliterating Grey (Tussendrukgrijs)
- 05 Blackboard Black

The PMS references are an approximation. Degree of dilution, type of material and type of light can affect the results.