



## PRODUCT GROUP 600

### Series 640-T29-33/05 2-Component Thermochromic Ink, black



Temperature active systems are special interactive effect coatings which are – in dependence to the ambient temperature – changing its color from colored to colorless (slightly milky). This procedure is reversible, that means, it can be repeated as often as desired (approx. 2500 times). The color change happens in the typical temperature range of 29°C (+/- 3°C) and this has proved to be the ideal temperature for activation by the human hand.

Thermochromic ink is mainly conceived for indoor use since its light fastness is limited. Thus, use of thermochromic ink is limited for outdoor use and this is also the reason why thermochromic printings should be over-lacquered with a protection varnish. Printcolor offers a UV-light protection varnish, Series 640-5700.

Furthermore, please be aware, that with the color change, no 100 % transparency results, since the integrated pigments of the special functional substances are self-scattering and thus have an optical effect which leaves a slightly milky impression to the viewer. By using the aforementioned over-lacquering technique, this effect is reduced to the best.

Thermochromic inks should not permanently be exposed to temperatures in the range of the color change, because this would inevitably result in a aging process which would reduce lifetime of the reversible thermochromic properties. Thermochromic inks are not absolutely opaque, so that the substrate coating are to be set to the effect color system. Usually, black thermochromic inks are preferred since they are providing the best substrate coverage at lowest price.

Printing of common substrates is normally done with a mesh of 77-55 Y PW PET 1000. Adequate opacity – with strong contrasts – can be achieved with a mesh of 43-80 Y PW PET 1000.

Besides black (Series 640-T29-33/05), which is offered from stock, blue and red are often used in practice. Other color shades are available upon request, however rather unusual. Furthermore, color changing temperatures of minus 15°C up to 65°C can be adjusted.



#### SUBSTRATES

Soft- / rigid-PVC	Polyester, coated	Metals, Aluminum (raw, anodized, brushed)	Composites (Alucobond, Dibond, Vekaplan VL)
Coatings	Polystyrene, ABS, SAN	Polyolefin, coated or primered	PMMA (pre tests)



#### USE

<b>Application</b>	Graphical screen printing, partially functional coatings
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#### PROPERTIES, PROCESSING, DRYING AND MESH

<b>Mesh</b>	43-80 Y PW PET 1000 up to 77-55 Y PW PET 1000
<b>Drying / Curing</b>	Oven- / Jet- / Air drying
<b>Further Processing</b>	Punching, cutting, embossing



#### ADDITIVES

<b>Thinner</b>	Series 600-017	<b>Addition Ratio</b>	10 - 15% by weight
<b>Retarder</b>	Series 600-018	<b>Addition Ratio</b>	10 - 15% by weight





DIGITAL



FLEXO



FUNCTIONAL COATINGS



PAD



PREPRESS



SCREEN

## VARIOUS

<b>Delivery Conditions</b>	1kg / 5kg / 25 kg
<b>Other</b>	Stir well before use Bonding with hardener Series 600-HDA or Series 600 HDS; addition ratio 4:1; pot life > 8 h (under normal conditions)

### Precautionary measures

Read material safety data sheet prior to processing. The material safety data sheets according to OSHA form contain indication 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 our leaflets have been made to the best of our knowledge and are given without any obligation. 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 printing job. In case of any doubts 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. In case of justified complaints the manufacturer can only be made liable for the countervalue of the used ink system. Addition of not mentioned products or competitors products are on your own risk and releases Printcolor Screen Ltd. of any later demands, especially in cases of damage and loss caused by alien products. All former leaflets are no longer valid. (06/2009)



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