



## PRODUCT GROUP 300

### Series 320-T31-xx/05 Thermochromic Inks



Thermochromic inks are special effect layers which are changing their color - in dependence to the ambient temperature - from colored to clear and vice versa. The color change takes place at around 31°C which is the typical trigger temperature of the touch by the human hand.

Thermochromic inks are mainly conceived for indoor use. Outdoor use is limited and therefore, thermochromic printings should be lacquered with a protection varnish. A further **MUST** for lacquering with a protection varnish is the well known limited light fastness of the thermochromic pigments. It is therefore recommended to use the solvent based protection varnish Series 320 5700 or the UV-curable protection varnish Series 560 5700. Thermochromic inks should not permanently be exposed to temperatures in the range of the color change, because this would inevitably result in an aging process which would reduce lifetime of the reversible, thermochromic properties. Thermochromic inks are not absolutely opaque, so that the substrate coatings are to be set to the effect color system. Printing of common substrates is normally done with a mesh of 77-55 Y PW PET 1000. Adequate opacity – with strong contrasts – can be reached with a mesh of 43 thread/cm. Please be aware, that no total transparency (100%) can be reached at the color change, because the pigments of the special effects material do have a whitely color because of particle size and therefore cause an optical effect which leaves a slightly milky impression. By means of the aforementioned overprinting with a protection varnish, this effect is reduced to the best.

As a standard, the black setting of Series 320 T31-33/05 is on stock. Furthermore, the red /Series 320-T31-18/05) and blue (Series 320-T31-26/05) thermochromic inks are common colors. Other colors are available on request. However, please allow a certain delivery time because only limited quantities of the basic raw material is being kept on stock.



#### SUBSTRATES

Soft- / rigid-PVC	Coated Polyester	Paper, paperboards, cardboards
Polycarbonate	Coatings	Polystyrene, ABS and SAN



#### USE

<b>Application</b>	Graphical screen printing, advertising- and promotional materials, packaging's, partially functional coatings
--------------------	---------------------------------------------------------------------------------------------------------------



#### PROPERTIES, PROCESSING, DRYING AND MESH

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



#### ADDITIVES

<b>Thinner</b>	Series 300-017	<b>Addition Ratio</b>	10 - 15% by weight
<b>Retarder</b>	Series 300-018	<b>Addition Ratio</b>	10 - 15% by weight



#### VARIOUS

<b>Delivery Conditions</b>	1 kg / 5 kg / 25 kg
<b>Other</b>	Stir well before use



**H. W. SANDS CORP.**

1003 W. Indiantown Road • Suite 215 • Jupiter, FL 33458  
Telephone: (561) 743-8090 • Facsimile - (561)743-4088  
Website: [www.hwsands.com](http://www.hwsands.com)

#### Disclaimer

Please thoroughly read the Material Safety Data Sheet (MSDS) prior to processing. The Material safety Data Sheets according to 91/155/EWG form, contain indications of hazardous ingredients. Exposure levels and instructions for precautions when processing, handling and storing as well as first aid. The information given in the MSDS refers to the processing as described within this technical leaflet. Above data are based on laboratory tests and field experience. All therein contained statements are to the best of our knowledge without any obligation from our side and do not discharge from testing the product by yourself. In doubtful cases, you are kindly requested to either perform your own tests or refer to our technical staff. Application, use and processing of the delivered products are beyond our control and are therefore at your own risk and responsibility. Printcolor is thus free from any guarantees or liabilities. In cases of justified complaints, Printcolor can only be made liable for the counterpart of the utilized ink system. Adding not stated products or foreign / competitors products, is solely at your own risk and liberates Printcolor of any later calls; especially in cases when damages occurred and which have been caused through use of products of foreign type. This leaflet replaces all former issues. (01/2009)