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THERMOCHROMIC UV CURE WATER BASED SCREEN INK

DESCRIPTION

Thermochromic screen inks, in printed form, are coloured below a specific temperature, and change to colourless or to another, lighter colour as they are heated through a defined temperature range. These inks are available in various colours and activation temperatures. Standard activation temperatures are 15, 25 and 43° C (59, 77 and 109° F). Other activation temperatures are also available, from -5° C to 65° C. The activation temperature is defined as the temperature above which the ink has completely changed to its final clear or light colour end point. The colour starts to fade at approximately 4° C below the activation temperature and will be in between colours within the activation temperature range. The colour change is "reversible," i.e., the original colour will be restored upon cooling. Thermochromic Screen ink is ideal for promotional items, temperature indicating labels, games, novelties, etc.

NB. When hiding images, it is recommended that Black be used to obliterate the image – 2 coats may be required.

TYPICAL PROPERTIES

Shelf Life unmixed	12 months
Shelf Life mixed	24 hours
Appearance	Viscous Liquid
Mixing Ratio	1:1 (Binder:Pigment)
Percent Volatiles (Approx.)	N/D
Recommended Mesh Size	110
Coverage	25gms / sqm
Thinners	Demineralised water only

STORAGE AND HANDLING

The inks have good stability when stored away from heat. Store below 25ºC. A shelf life of 12 months is guaranteed providing that the material is stored in a cool and dark environment and not mixed. Long term exposure to UV light or elevated temperature can cause loss of thermochromic function. Consult MSDS prior to product use.

SENSITIVITY

Thermochromic materials are sensitive to adverse environmental conditions. These are listed below, along with a description of the nature of the sensitivity, and recommendations with regards to them.

LIGHT: Most significantly, long exposure to UV and some fluorescent lights can degrade colour intensity and changing characteristics of the ink. Extreme exposure of more than several days of direct sunlight may degrade the colour of the ink, though it will probably still change colour. More than 600 hours of a strong fluorescent light may also cause a loss of colour in the thermochromic.

HEAT: Extended exposure to very high temperatures, i.e., 50ºC or higher, can also degrade the pigment. With heat, the exposure only has an effect if a given temperature is constantly maintained for a given amount of time. Thermochromic capsules can survive temperatures >200ºC, however, they can only be exposed to these temperatures for very short periods of time (<10 seconds).

CHEMICALS: Care must be taken to avoid the use of polar solvents such as alcohols, acetates etc., as these can damage the microcapsule walls.

ALL APPLICATIONS USING COLOUR CHANGING INKS OF ANY KIND SHOULD BE THOROUGHLY TESTED PRIOR TO APPROVAL FOR PRODUCTION

For further information or assistance, please contact B&H Colour Change Ltd on +44 (0) 845 4584121