

## Technical Data Sheet

### Thermochromic Flexographic Inks (UV Curable) Reversible Temperature Reactive Material

**Thermochromic Flexographic Inks** (UV Curable) is suitable for a wide range of substrates including paper, plastic (polyethylene, TC polypropylene), coated papers and board substrates. The ink is supplied as a 1 part ink system ready formulated and easy to use allowing flexibility in application and optimization in appearance of printed articles.

#### Colors and Activation Temperatures

The activation temperature is defined as the temperature above which the ink has almost achieved its final clear or light color end point. The color starts to fade at approximately 4°C below the activation temperature and will be in between colors within the activation temperature range. The color change is "reversible," i.e., the original color will be restored upon cooling.

**Colors** include Black, Blue, Magenta, Green, Orange, Red, Purple, Brown and Custom Matching is available.

**Activation Temperatures** can be set anywhere between 10°C through 69°C. It is defined as the temperature above which the pigment has almost (>95%) achieved its final clear or light color end point.

#### Product Properties

##### Viscosity at 75°C

Brookfield #4 spdl/60 rpm; <600cps (depending on formulation)

##### Curing

250 fpm for each 300 wpi lamp

##### Anilox

For use with anilox cell count (120-360) line screen. Around 10 BCM or higher preferred. May be run on higher aniloxes (360-550 line screen) depending on desired color intensity.

##### Lightfastness

Thermochromic materials rate a 3 or less on the Blue Wool Scale.

#### Technical Specifications

Pigment Content: 30% +/- 1.5%  
Particle Size: <6 microns (95%)  
Solvent: N/A

#### Light Fastness

Thermochromic inks are inherently susceptible to damage by UV light. They are only recommended for uses in application with minimal exposure to UV light. UV protective varnish should be used to slow degradation caused by UV light.

Light fastness properties of supplied Thermochromic colors are as follows:\*

Green 1  
Red, Orange & Magenta 1-2  
Yellow, Blue, Purple 2  
Turquoise 3

\*Rating according to measurement on Blue Wool Scale

#### Storage and Handling

Thermochromic UV Flexographic Inks should be stored away from solvents, sources of UV light and high temperature. Ink should be thoroughly mixed prior to application. Please consult MSDS prior to use.

Shelf Life of Unmixed Ink 3 Months (sealed container)  
Do not store in temperatures in Excess of 25°C/77°F

Do not freeze

#### All Applications using any QCR Solutions Corp products should be thoroughly tested prior to approval for production.

Information in this Product Data Sheet is compiled from our general experience and data obtained from various technical publications. While we believe that the information provided herein is accurate at the date hereof, no responsibility for its completeness or accuracy can be assumed. Tests are carried out under controlled laboratory conditions. Information is given in good faith, but without commitment as conditions vary in every case. The information is provided solely for consideration, investigation and verification by the user. We do not except any liability for any loss, damage or injury resulting from its use (except as required by law). Please refer to the Material Safety Data Sheet before using products to ensure safe handling.