

Photochromic Inks

Description

By means of UV-light (sunlight or UV-black light, 365nm), photochromic inks react with a reversible color change. The UV-light is changing the stereo-chemical structure of the color molecules and therewith a different absorption of the light occurs. Against ordinary pigments, which do only reflect part of the light, photochromic pigments absorb part of the light and let the remaining light go through. Especially on a pale (preferably on a white substrate), the remaining parts of the light are being reflected by the substrate and the element seems to be multicolored. A photochromatic ink can also change its color on a dark substrate, if a supplementary pigment is added to it.

Application Suggestions

Laminable, silky-mat PVC-screen printing ink for production of a variety of card-systems
Suitable for hard- and soft-PVC, polyester, coated (paper and paperboards)

Product Properties

382-PC08/05: Photochromic ink, yellow
382-PC20/05: Photochromic ink, magenta
382-PC21/05: Photochromic ink, violet
382-PC26/05: Photochromic ink, blue

Printing Recommendations

Mesh: 77-55 PET 1000
Drying/Cutting: Air drying
Further Processing: Resistant to punching, cutting and embossing

Thinner: 5-15% by weight
Retarder: 5-15% by weight

Other: Stir well before use

Stability/Storage and Handling

Photochromic dyes are instable on a long-term basis. The balance of the two colored structures slowly moves towards the colored condition. The longer they are exposed to the UV-light, the less they return into the colorless condition. After being exposed to the sunlight for a few months, they completely lose their ability to change color. However, if stored and handle in places where they are not permanently exposed to the UV-light, they keep their ability to change colors for years.

All applications using this product should be thoroughly tested prior to approval for production.

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