

Checkmate FL is an extremely durable, UV curable, digital printing ink specifically formulated for applications on various plastics, where a high level of flexibility is required. With exceptional adhesion characteristics, post-press finishing operations such as die cutting, CNC routing, saw cutting and guillotine trimming, can be performed with no edge chipping or loss of ink adhesion to material. The distinctive characteristics of Checkmate FL allows for head-bending on Acrylic, ABS, Expanded PVC, HIPS, PETG, and Polycarbonate materials. Made with only the finest long-term outdoor pigments, Checkmate provides an excellent color gamut for your color certified printers.

Performance Properties

- Excellent stretch and flexibility
- Extremely broad range of adhesion
- Flexible for multi-layer constructions
- Elevated color strength for backlit applications
- Brilliant color array and high densities
- Tremendous finishing characteristics
- Manufactured for Flatbed presses
- Water Resistance

Recommended Substrates

- Acrylic
- ABS
- Corrugated Plastic
- Expanded PVC
- High impact Styrene (HIPS)
- HDPE (min. 40 dyne)
- PETG (Copolyester)
- PET films
- P.S Vinyl and Reflective Vinyl
- Aluminum and painted metal sign materials
- Many other plastic and laminate materials

Light fastness

Extensive weathering tests are currently in progress. Estimated exterior durability is three (3) years. Accelerated machine weathering's are reference standards and cannot precisely reproduce actual outdoor performance. Based on prior correlation of accelerated testing versus real time exposure, 500 hours is equated to approximately one year, 45 degrees south Florida.

Colors Available

- CMYK
- Light CMYK
- White

Roller Coating and Screen Printing applicable products

For additional protective clear overprint products, which will improve light fastness, and backing white products for sub-surface printing constructions, please contact Polymeric Technical support for a list of Roller Coatings, and Screen products applicable for your specific construction.

Curing / Processing Guidelines

Ink will cure well when utilizing an optimal cure window of 200- 250 mJ/ cm² , 755 mW/ cm² is generally achieved with two (2) 300 watt per inch mercury vapor lamps. This should provide thorough cure of the product. Adhesion should be a minimum on 95% form curing unit with final adhesion developing within four (4) hours of initial polymerization. If a loss of gloss or adhesion due to insufficient cure is noticed, a decrease of saturation levels will increase light penetration and improve cure.

The Checkmate FL system, when properly cured develops an extremely durable and flexible ink film. Even though the cured ink film has been engineered to optimize processing and handling, the printer must assume responsibility for pre-testing and qualifying production parameters prior to printing. The intensity of cure, weight or caliper of the material and/or elevated ambient temperatures and

humidity of the printing and storage environment will influence some media.

Storage

Care should be taken to store ink in tightly closed containers located in a cool (60-80°F/15-27°C) dark place. With suitable conditions, unopened ink is expected to have a shelf life of approximately twelve (12) months for colors and six (6) months for white, from date of manufacturer.

Precautions

Read the safety data sheet prior to processing. It contains instructions for precautions to be taken when handling inks. If ink comes in contact with skin wipe off with a clean, dry cloth (do not use solvent). Wash and rinse the affected areas with soap and water.

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