

DuPont™ Cyrel® DFR

HIGH DUROMETER DIGITAL PLATE

Preliminary Technical Data Sheet



DuPont Packaging Graphics continues to be a global technology leader in the development and supply of flexographic printing systems. Our R&D team continues to develop innovative new solutions to help our customers expand their business by taking advantage of new and profitable opportunities in the growing flexographic packaging market. The DuPont Packaging Graphics portfolio of products includes DuPont™ Cyrel® brand photopolymer plates (analog and digital), Cyrel® platemaking equipment, Cyrel® round sleeves, Cyrel® plate mounting systems and the revolutionary Cyrel® FAST thermal system.

DuPont™ Cyrel® DFR is the high durometer plate for the DuPont thermal platemaking process, designed to meet the needs of high quality flexo with finest halftone, linework and solids.

Applications

- Flexible packaging
- Tag & Label
- Envelopes
- Carrier bags
- Folding cartons
- Pre-print liner
- Beverage cartons

Product Features

- Extremely rapid access time thanks to thermal plate processing without a drying step
- High ink transfer for outstanding tonal reproduction
- Image relief is clean and sharp for all plate gauges
- High durability and clean printing for long, uninterrupted press runs
- Exceptional thickness uniformity. No plate swelling during platemaking
- Less make ready time on press, comes up to color quickly
- High resistance to ozone and white light results in excellent storage capability

Printing Ink and Solvent Compatibility

Cyrel® DFR offers excellent compatibility with solvent-based, water-based inks, and UV inks.

Platemaking

The Cyrel® FAST thermal developer allows the production of Cyrel® FAST finished plates in less than one hour, making it the ideal just-in-time platemaking system for a market that demands quick turnaround at the highest possible quality. The Cyrel® FAST thermal developer delivers outstanding plate quality and uniformity. This processor has the ability to produce a finished plate without solvent washout. The Cyrel® EC/LF for exposing and light finishing plates is available to complement the Cyrel® FAST thermal developer.

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Process of Use

DuPont™ Cyrel® DFR is designed to work with Cyrel® FAST thermal platemaking. Expose the plate through the back to establish the floor and minimize sensitivity. Back exposure varies according to relief required. Remove the protective coversheet, and image the plate with the Cyrel® Digital Imager (CDI). Expose the front of the plate surface. Process the plate in the Cyrel® FAST thermal developer. Finish the plate in a light finisher to eliminate surface tackiness. Post-expose the plate to ensure complete polymerization.

Mounting

Microdot mounting devices are recommended for mounting Cyrel® DFR plates. The double sided adhesive should first be applied to the cylinder or sleeve—not the plate—to ensure easier and precise laydown. The polyester base will maintain accurate register even with large plates.

Storage—Raw Material

Store unexposed plates in a cool area (4–32°C, 40–90°F), away from direct sources of heat. Humidity control is not required. Cyrel® DFR is foam interleaved to provide maximum protection of the plate after manufacture and during transportation and storage. Plates should be stacked flat. Plates should not be exposed to direct sunlight or excessive white light. Continuous exposure to very high ozone concentrations should be avoided.

Handling—Raw Material

Like all photopolymer plates, Cyrel® DFR plates should be handled under UV free light; e.g., fluorescent tubes covered with amber sleeves.

Storage—Finished Plates

After printing, plates should be thoroughly cleaned with compatible solvent before storing. They may be stored on cylinders, sleeves or demounted and stored flat.

Technical Data			
	Cyrel® DFR 45 Thickness 1.14 mm/0.045 inch	Cyrel® DFR 67 Thickness 1.70 mm/0.067 inch	Cyrel® DFR 107 Thickness 2.72 mm/0.107 inch
Durometer	78–80 Sh A	70–72 Sh A	64–66 Sh A
Image Reproduction	1–98% 60 L/cm/150 lpi	1–98% 60 L/cm/150 lpi	1–98% 60 L/cm/150 lpi
Minimum Positive Line Width	0.100mm/4 mil	0.100mm/4 mil	0.100mm/4 mil
Minimum Isolated Dot Size	300 µm	300 µm	300 µm
Relief Depth	0.40–0.50 mm/0.016–0.020 inch	0.45–0.55 mm/0.018–0.022 inch	0.45–0.55 mm/0.018–0.022 inch

For more information on DuPont™ Cyrel® or other DuPont Packaging Graphics products, please contact your local representative:

United States

DuPont Packaging Graphics
Chestnut Run Plaza, Bldg. 702
974 Centre Road
Wilmington, DE 19805
800-345-9999

www.cyrel.com/na

Canada

DuPont Packaging Graphics
707 Mississauga Road
Mississauga, ON L5N 5M8
Canada
905-821-5042

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Caution: Do not use in medical applications involving permanent implantation in the human body. For other medical applications, see "DuPont Medical Caution Statement," H-51459 or H-50102-2.

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