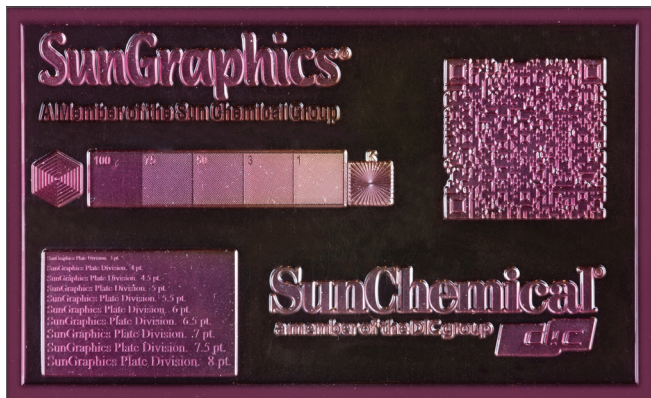


# Advancing Package Graphic Quality through HD Plate Technology

Sun Chemical's HD Plate Technology Helps Packaging to Stand Out on Store Shelves



**Figure 1** An example of HD plate technology offered by Sun Chemical to NWTL, wide web, corrugated and folding carton printers.

## Introduction

The goal of every brand owner is to sell products in packaging that stands out in the store aisle and captures the attention of consumers.

According to a study by the Point of Purchase Advertising Industry (POPAI), U.S. consumers typically spend 22 minutes per visit at a self-service store. On average, the number of brands on display is in excess of 1,700 and of these, approximately 146 packages actually catch the eye of the consumer.

The study states that a package has just nine seconds to make an impression that leads to an impulse purchase. This is important because the study showed that 70 percent of impromptu buying decisions are made in store. Also, 70 percent of packages picked up from shelves are dropped into shopping carts, so the odds are high that if a package is handled, it will be purchased.

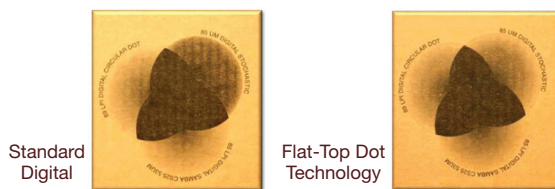
The POPAI study stresses the importance of package graphics and presentation quality to help consumers decide on a purchase. One way to help packaging truly pop off the shelf is to print the graphics with high-definition plate technology.

Sun Chemical offers HD plate technology (see Figure 1) to NWTL, wide web, corrugated and folding carton printers as a way to bring their customers better print quality by expanding tonal range and creating a wider color gamut as well as printed line screen (lpi) without an expensive investment in new equipment.

## The Current State of Digital Plate Technology

Currently conventional digital plates are the standard technology used by most package printers, and while they are a significant advancement from CTF platemaking technology, they still have some limitations.

Conventional digital-produced dots are very pixilated, which creates dot gain, inconsistent results, and fluting (see Figure 2)—a common challenge for corrugated printing in particular.



**Figure 2** Fluting, a printing defect in which a series of waves or corrugations appear in the paper-grain and web-travel direction, is especially noticeable in corrugated printing. HD plate technology reduces the effects of fluting and other printing defects, such as dot gain.

working for you.

Dot gain and dirty print are just the first concern; image quality is another. Typically, conventional digital plate image quality reaches approximately 2,540 ppi. The widely accepted definition of HD is the combination of high-resolution computer-to-plate imaging at 4,000 ppi and special screening.

Many printers have in-house platemaking capabilities and are forced to make a very large investment to keep up with the quickly and constantly changing plate technology. With printers facing higher printed quality demands from CPG companies and shorter lead times, many question the value of keeping plate capabilities in-house.

Conventional digital plates still don't bring flexographic printing capabilities to the print quality level of gravure or even offset printing.

These limitations of conventional digital plate technology can all be removed by investing in HD plate technology offered by Sun Chemical.

### High-Definition Plate Technology from Sun Chemical

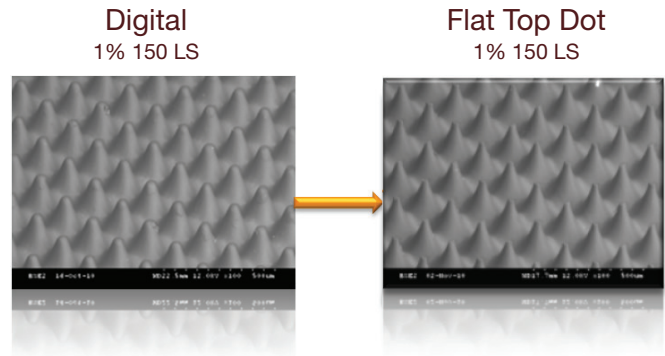
Those who partner with Sun Chemical will have access to high-definition plate technology utilizing ESKO HD software and CDI high-resolution imaging to print with image quality of up to 4,000 ppi, resulting in expanded tonal range, wider color gamut and increased screen lpi to produce sharper, more vibrant images and colors. (See Figure 3.)



**Figure 3** Packaging that utilizes Sun Chemical HD plate technology is more vibrant and crisp than with conventional digital plates, producing packaging that pops off the shelf and grabs the attention of shoppers in the store aisle.

Combining HD benefits and quality with flat-top dot plate technology produced with MacDermid Printing Solutions' LUX system and/or DuPont's DigiFlow/DigiCorr system increases capabilities by printing with 30 to 60 percent less impression sensitivity compared to standard digital plates, which allows for longer, cleaner, more consistent runs with fewer stops for press adjustments and plate cleaning.

The system sharpens images even further, allowing for smooth screen transitions to zero, reduction or elimination of hard edge highlight screen break, and decreased dot gain while minimizing the fluting effect in

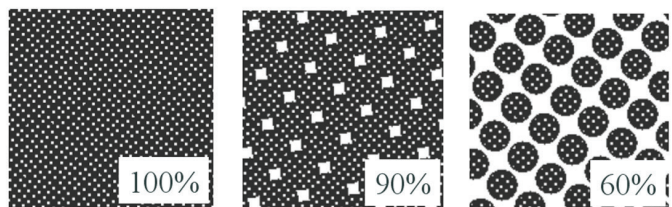


**Figure 4** Combining HD benefits and quality with flat-top dot plate technology produced with MacDermid Printing Solutions' LUX system and/or DuPont's DigiFlow/DigiCorr system allows for a smaller printed dot, less mechanical dot gain and increased printed line screen. At 4,000 ppi, HD plates create a more circular dot and dot spacing than conventional digital plates.

corrugated printing. A smaller printed dot produces less mechanical dot gain and increases printed line screen. At 4,000 ppi, HD plates create a more circular dot and dot spacing than conventional digital plates. (See Figure 4.)

An added benefit of flat-top dot technology is the uniform-height printing surface between the screens and solids versus conventional digital plates. The uniform surface allows for an even impression across the plate. All copy starts printing at the same time, which allows graphics to come to color faster and reduces press set-up time. The flat-top plate structure and the uniform printing surface also help the plates last two to five times longer than conventional digital plates.

Sun Chemical HD plate technology is also available with MicroCell technology, which enables printers to texturize the surface of the plate solids and screens to reduce pinholing in solids, provide higher ink densities, and improve contrast in shadow areas. (See Figure 5.)



**Figure 5** MicroCell technology enables printers to texturize the surface of the plate solids and screens to reduce pinholing in solids, provide higher ink densities, and improve contrast in shadow areas.



Sun Chemical HD plate technology enables quality to match offset and digital print for label printers, making repurpose of designs easy. In flexible packaging, HD plates give stronger solids for more shelf impact, thanks to expanded tonal range and easier printing. The core benefits for corrugated printers are smoother images and a broad tonal range that rivals pre-print and gravure. Folding carton printers benefit by being able to match offset quality for optimum flexibility in production.

More important, printers don't need to invest in expensive new equipment to incorporate HD, flat-top dot and MicroCell plate technologies.

### Other Benefits of HD Plates from Sun Chemical

With a 100% digital workflow from the front end art design process to the finished product, Sun Chemical can provide a complete package of offerings from design concept to consumer. The package could include everything from conceptual art creation, prepress and color management to printing plates, inks, coatings, and consumables. By utilizing all of Sun Chemical products and services, printers can reduce the number of suppliers and obtain competitive pricing on plates, inks, coatings, etc.

With two world-class platemaking facilities in Concord, CA, and Maumee, OH, Sun Chemical (see Figure 6) can be a partner for outsourcing plates, with 24- to 48-hour turnarounds to meet tight deadlines. Customers also have the opportunity to gain additional value through Sun Chemical by complementing their existing in-house plate production by avoiding expensive capital requirements to add HD technology.



**Figure 6** Sun Chemical has two world-class platemaking facilities in Maumee, OH (above), and Concord, CA.

Sun Chemical is also in the process of becoming the only ink manufacturer to be HD certified by ESKO.

### Summary

Brand owners are under a lot of pressure to sell product, so it is critically important for them to create packaging graphics that really pop off the shelves and sell. Compared to HD, conventional digital plate technology just isn't up to the challenge of creating crisp, high-resolution graphics that grab consumers' attention in the grocery aisle.

Sun Chemical's HD flexographic plate technology helps NWTL, wide web, corrugated and folding carton printers achieve this extraordinary graphic quality. Printers also have the added benefit of partnering with Sun Chemical, which offers a full package of competitively priced prepress, color management, plates, inks, coatings and consumables solutions.



*Sun Chemical's HD flexographic plate technology helps NWTL, wide web, corrugated and folding carton printers achieve extraordinary graphic quality.*

**To learn more about Sun Chemical HD plate technology, call 708-236-3798 or visit [www.sunchemical.com/HDPlates](http://www.sunchemical.com/HDPlates).**

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